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The impact of the European Economic Community upon U.S. exports of agricultural commodities

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THE IMPACT OF THE EUROPEAN ECONOMIC COMMUNITY UPON U. S. EXPORTS OF AGRICULTURAL COMMODITIES

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I. INTRODUCTION

In 1926 the United States surpassed Great Britain to become the world's largest trading nation. Even though United States exports are small relative to her gross national product, the importance of this trade and trade in general to the United States economy cannot be denied.* The United States sells more than 20 billion dollars per year of its goods to other countries or approximately 1/25 of our entire production of goods and services. This is dramatized even more when we consider that 3 million Americans or 1 out of every 5-6 workers in our factories owes his job to industries turning out goods for sale abroad, while one out of every seven farm workers produces for export. The crops from one acre out of every six are sold abroad contributing to United States leadership in the world export market of agricultural products.

It is a widely accepted fact that the favorable terms upon which the United States has maintained this world leadership over the years have as their basis a quite unique combination of geographical and economic factors. These factors which have played an important historical part in determining the United States position in world trade may be generalized in the following manner (30):

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*In 1962 total United States exports amounted to 3.86 per cent of total GNP.

1. The United States has had an abundance of a wide variety of natural resources containing the necessary components needed in an industrialized economy.*

2. The United States has had the abundant capital necessary for economic growth and development. This capital made it possible for the United States to find a competitive spot in the world economy through mass production, research, and development.

3. The United States has had a socio-political economy which has produced bold and imaginative entrepreneurs. Much of this favorable business climate was the direct result of the effective combination of a vast, rich, unexploited land mass and the equality of opportunity present which has stimulated a vigorous competitive race.

4. One cannot ignore the secondary factors which nonetheless have played such an important role in the United States economy. One of the more important is the presence of a large domestic market capable of absorbing new and high quality products. It was this vast market that enabled entrepreneurs to mass produce profitably, thereby utilizing technological advancements to the fullest. It is this mass production which has enabled the United States to compete successfully in world

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*Coal, iron, cheap water transportation, wood, and an abundance of minerals supplied not only the United States, but also the rest of the industrialized world. There was also a vast expanse of land endowed with favorable climate and good soil.

markets.

There is, however, reason to fear that some of these particular sources of strength may be slowly wearing away in the face of more efficient transportation and communication means along with economic changes taking place in the United States and the rest of the world. Some of the more apparent changes are:

1. The United States advantage of resource abundance has been reduced by a number of factors. The vast quantities of resources once held by the United States have been chewed up by our vast industrial machinery to the extent that we now find ourselves competing for supplies from foreign countries. Oil and gas have replaced coal as the cheapest source of energy and with the availability of cheap Middle East oil, our industrial rivals across the sea have reduced the advantage of cheap energy previously enjoyed by the United States.

2. The United States advantage of capital abundance has also decreased as capital has become more mobile and stocks have been built up in other of the developed countries.

3. The post-war increase in incomes in Europe and other areas has among other factors, expanded the size of their domestic markets thereby making mass production of standarized products much more feasible. This economic development makes it possible for these countries to make use of modern technology and increase their potential output more rapidly than if they were separated by various national barriers

hindering the flow of labor and capital between them. In particular, the economic structure of Western Europe has been moving closer to that of the United States. The United States is now being confronted with much keener competition and a much more balanced concentration of economic and political power. Economic integration in Europe has seemingly accelerated these economic developments in several ways, some being more in evidence than others. This launching of the E.E.C. accompanied by tendencies towards regionalization in other parts of the world is creating serious trade implications for the United States and other third countries outside of these forthcoming alliances (for a rigorous analysis, see Thorbecke, 41).

4. Finally, one must acknowledge the changing political scene, both at home and abroad. In the past the United States has been able to limit or withdraw access to its domestic markets whenever it appeared that in-roads were being made by foreign producers that might possibly be damaging to domestic producers. This resulted from the relatively small importance of trade to the American economy and of the lack of retaliatory power in the rest of the world. However, with the development and integration of foreign economies coupled with the United States balance-of-payments deficit of the past few years the sensitive economic nerve of the United States is being exposed to the "good will" of foreign countries whose economic power is finally beginning to be felt throughout

the world.

The advantage of the United States of low cost agriculture has been offset by government policies that limit increasingly the ability of the United States to market its products commercially abroad. This is largely the result of the incompatibility between United States trade and domestic agricultural policies. As a result the United States is going to find it increasingly difficult to sell its products in a competitive manner on the world market at a period in time when these foreign sales of agricultural commodities are so important to the domestic economy.

Just six years ago at the beginning of 1958, Belgium-Luxembourg, France, West Germany, Italy and the Netherlands joined to sign the Treaty of Rome, to form the European Economic Community better known as the Common Market. The first day of January, 1959, saw the E.E.C. machinery come into existence as one of the most spectacular experiments in regional economics. If all things move according to plan, in 15 years this federation will have formed something between a customs union and a full economic union. In short, the member countries hope to attain internal free trade with some exception for agriculture, a common external tariff system, partial freedom of internal factor movement, partial coordination of economic and social policies, and a common framework of agricultural protection and control. The E.E.C. contained in 1960 a population of 180 million and a GNP equivalent to

approximately 235 billion dollars. Within the foreseeable future it seems quite possible that most of Western Europe could be linked in one market area with a population much greater than that of the United States and with economic power greater than or equal to the United States.

The people of these countries are attempting to gain a new kind of prosperity through increased economic efficiency and a resulting rise in national incomes. Since 1959, the Six have reduced tariff levels among themselves by 35-40 per cent. By July 1, 1963, it is likely to reach a 50 per cent reduction or approximately 20 per cent ahead of the planned 30 per cent internal tariff reduction at this time.

The advent of the Common Market is causing the rest of the world to be concerned with the prospect of selling less in the European area now bound together by the Treaty of Rome. The theory of customs unions as developed since the end of World War II by Jacob Viner, J. E. Meade, Bela Balassa and other economists tells us that such an attempt at economic integration involving a large portion of the world economy is likely to have predictable effects upon the pattern of world trade and the economic welfare of third countries (5), (33), (68). It is difficult, to say the least, to predict the outcome of the aforementioned economic changes as many of the relevant variables are yet unknown. It does, however, seem feasible to assess the impact of the E.E.C. upon the United States and third countries against the general background of

changing relative positions rather than placing complete emphasis on the diversion of trade created by the elimination of tariffs between the member countries. The amount of trade diversion that does take place is dependent upon the policy decisions made by the E.E.C. which will influence and be influenced by the whole constellation of political-economic power relationships that exist between the E.E.C. and the rest of the world, particularly the United States.* Generally adverse effects on United States exports going to the E.E.C. will not necessarily follow automatically from integration of the Six. However, adverse effects on United States exports could come about through future commercial and economic policies of the E.E.C. (30, p. 89). In essence then, the factors working against the United States position in its export position with respect to the Common Market arise fundamentally from changes in economic structure of the Six coupled with improved transportation and communication between them. It is easy to exaggerate the effect of the Common Market arrangement on the Six since many of the internal and external forces were in play before its formation. Integration is, however, contributing certain marginal effects which shall be examined more critical-

*The common external tariff cannot really be regarded as unduly protective by American standards. Tariff comparisons are difficult, but it is probably significant that at the rates prevailing in 1960 the average United States duty was higher than the common external tariff for 47 out of 74 chapters of the Brussels classification for which data was calculated by the Committee for Economic Development.

ly later in the study along with possible welfare implications.

For the purpose of a more rigorous examination of the E.E.C.-U.S. trade pattern it is beneficial to examine them in the light of the following groups: industrial products; non-agricultural raw materials; and agricultural products. As the emphasis of this study is to be concerned with the latter group it would seem expedient to concentrate from here on out on this particular aspect of U.S.-E.E.C. trade relations.

The United States has a key interest in its agricultural exports for several important reasons. First, farm productivity and efficiency have enabled American agriculture to produce in excess of domestic demand thus bringing about need for foreign markets as a major outlet for United States farm products. Approximately one-third of total U. S. agricultural exports are financed under government export programs and are either sold for foreign currencies, donated, or bartered. There are really two types of markets for United States agricultural exports; the markets in the developed industrialized countries where the United States sells for dollars and the markets in the developing countries where the bulk of United States sales are on concessional terms. The general economic well-being of the agricultural producers depends upon a healthy trading atmosphere in these markets.

A second reason for concern with our agricultural exports is directly connected with the maintenance of a healthy balance-of-payments position which demands an expansion of

export sales of products in which the productivity growth has been great enough to offset the loss of sales in those products whose slower productivity gain has led to a loss of competitiveness. Because our agricultural productivity has had a growth rate higher than the national average it is hoped our exports of agricultural commodities will expand. Our exports of agricultural commodities to the E.E.C. constitute an essential part in the balance-of-payments. In 1962, 23.6 per cent of United States agricultural exports of 5.6 billion dollars went to the Six. The E.E.C. is a major dollar market and any sizeable cutback in this trade could widen the balance-of-payments deficit and impair the ability of the U.S. to meet its security and assistance commitments. The role of agricultural exports is considerably broader than that of merely helping to maintain a sound agricultural economy.

A most serious challenge to United States agricultural exports appears to have arisen this past year from the adoption by the E.E.C. of a common agricultural policy. This policy is of considerable importance and consequence to the United States since during recent years the E.E.C. alone has absorbed over 20 per cent of United States agricultural exports which amounts to one-third of United States dollar sales.* The impact of the E.E.C. on America's agricultural

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*If we include the U.K. the percentage of agricultural exports being absorbed by the area rises to over 30 per cent and includes about 50 per cent (1.5 billion dollars) of our dollar exports.

exports will depend ultimately on the patterns of trade creation and trade diversion brought about by the agricultural policies within the union coupled with the impact on trade of changing relations in price and consumer demand wrought by increases in effective competition and growth of consumer demand and domestic output. The apparent trend towards attainment of self-sufficiency in the production of certain agricultural products could well have considerable impact upon the U.S.-E.E.C. trade pattern. It is the purpose of this paper to examine this trade pattern in the light of European unification and to discuss the welfare aspects of this spectacular experiment in economic integration with regard to the United States economic position.

Part II of the study is concerned with studying the changing position of agricultural commodities in the international trade framework. This section concentrates on four particular aspects of the problem. Section A deals with the world trade in agricultural products with special attention being paid to changes which have taken place in this trade since 1928. Section B studies the United States position in this world export market with special attention given to examining the basis for the United States increase in share of the world exports of agricultural commodities from 1928 to 1960. Section C examines the international trade patterns of certain commodity groups and Section D concentrates on explaining the changes which have taken place in the pattern of trade between the United States and the Common Market countries from 1928 to 1960.

Part III is concerned with examining the impact of the E.E.C. on the future demand for United States exports of agricultural commodities within the Six. The economic implications of the Common Agricultural Policy are discussed and the problems and procedures connected with projection analysis are presented. The last section of Part III is concerned with projecting the future E.E.C. demand for imports of the more important temperate-zone agricultural products. The probable demand for United States exports of these specific commodities is then estimated on the basis of the projected net import demand of the Six. These commodity studies are evaluated as a group and the overall impact of the E.E.C. on trade in agricultural products with the United States is evaluated.

There have been various structural changes which have taken place in international trade in the past thirty years which have affected the position of agricultural commodities in the framework of world trade. In addition, the competitive position of many of the important trading countries has changed as these countries have developed at different rates and in diversified ways over the years. Many of these changes and trends are of an irreversible nature and will continue to affect the trading pattern in the future. Part II is an important part of this paper in that it points out and discusses these changes and trends which have taken place in the pattern of trade of agricultural commodities since 1928. It gives some insights into the probable changes which may be

expected to take place in the near future. An awareness of these changes is fundamental to the understanding of the problems and issues involved in making predictions with respect to the future trading pattern. Sections C and D of Part II are especially important to Part III as they discuss the economic characteristics of the individual commodity groups and the past pattern of United States-E.E.C. trade in agricultural commodities. The reader who is primarily interested in the projection analysis concerning the future United States-E.E.C. trade pattern in agricultural commodities is encouraged to examine the above sections rather closely before reading Part III.

II. INTERNATIONAL TRADE IN AGRICULTURAL COMMODITIES, PAST AND PRESENT

The purpose of this section will be to examine the trade patterns of agricultural products that have existed for the years 1928, 1933, 1948, 1952-54, 1956-57, 1958, 1959 and 1960 paying particular attention to the changing commodity structure of this trade along with the changing United States position in regard to world agricultural exports. This analysis will be of a twofold nature. First, the major relative changes in the importance of the various agricultural commodity groups will be examined within the framework of total world exports. The United States pattern of agricultural exports will then be examined in the light of these world changes and analyzed with emphasis being placed upon economic explanation and evaluation of the changes in the United States overall position which have taken place over the thirty-two years. Several indices will be utilized in such a manner as to show these changes of trade in agricultural products in terms of both commodity composition and regional distribution. Second, the structure of the network of trade in agricultural commodities flowing more specifically from the United States to the countries of the Common Market will be examined. Emphasis will be placed on the changing commodity concentration of these trade flows as well as on their past and present economic importance to the United States economy. This examination

will provide much of the statistical foundation for the following chapters dealing with specific projections of future demands for United States agricultural exports by the Common Market countries.

A study proposing to analyze the commodity composition of trade is faced with many inherent difficulties arising from the lack of time series data that are continuous, comparable and consistent in terms of the taxonomic scheme utilized in the examination. The reason for this lies in the imprecise and undefined nature of the objects being measured. Even in a continuous and consistent series a bias can be introduced in world trade figures for several reasons (52):

1. Lack of official data for several countries from time to time.
2. Various differences in classification of commodities by different countries.
3. Use of different systems of trade by various countries.
4. Incomplete data on transactions not involving foreign exchange which are omitted from the usual statistical procedures.
5. Differences in the handling procedures of flows of goods.*
6. Differences in classification of value by different countries as to f.o.b. or c.i.f. basis.

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*a. Exports of ships stores.
b. Landings from fishing or whaling vessels.
c. Frontier trade.
d. Movement of live animals.
e. Trade by developing companies.
f. Air-borne trade.
g. Parcel post.
h. Returned exports.

7. The inclusion of allowances for missing data by some countries and not by others.

The difficulties involved in such an examination are not as serious for agricultural commodities as for raw materials and manufactures. This stems from the fact that there is a much higher degree of homogeneity for specific foodstuffs which seems to vary little over time (e.g. wheat, tobacco, cereal grains, feed grains, oilseeds). As a result, taxonomic difficulties arising from data describing the trade in agricultural products are only of a minor nature when compared to manufactures, with most of the classificatory problems which do arise being the result of inconsistent aggregation into groups and subgroups within the agricultural product framework. Even this has been minimized the past few years by cross referencing the various commodity breakdowns used and stating specifically what comodities each breakdown does contain.*

A sixteen commodity breakdown of agricultural products was used consistently throughout this particular examination. The figures for 1928, 1933, and 1948 were aggregated from specific commodity measurements in a previous study of world export trade (3), while the value figures for the remaining years were taken directly from one single continuous source (51, 52). Beginning with 1958 the figures do not include any allowance for missing data. This undoubtedly introduces a

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*e.g. The Standard International Trade Classification of the United Nations.

downward bias, especially if data from an important country or commodity is missing. The percentage of world trade represented by the figures in Table 1 varies from 76-89% of total trade (51, 52). Through this eclectic use of statistical data, it is possible to examine the structure of trade in agricultural commodities over time with a much more broad coverage than if just one time series had been used.

One cannot expect to make precise measurements when dealing with international trade statistics for the aforementioned reasons. It is then preferable to regard these international trade statistics and computations as general indications of magnitude rather than exact measurements. Consequently any small movements in index numbers, as in any of the indices which will be used, should be ignored since they probably lie in the margin of error inherent in the original data. An attempt will be made to make some general conclusions from examination of these data ignoring any fine interpretation which may be within this margin of error (60, Chapter II).

A. World Trade in Agricultural Commodities

It can be seen in a glance that total world trade has expanded very rapidly in the past thirty-two years. During this time period, total world trade has increased in value almost five times the total value of world exports in 1928. Since 1948 this expansion has been almost phenomenal increasing from 43 billion to 127.5 billion dollars in 1960. A large

Table 1. The commodity structure of world exports of agricultural commodities 1928 to 1960[a] (millions of U.S. dollars and per cent)

Year / Commodity	1928		1933		1948		1952-54		1956-57		1958		1959		1960	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Meat & meat prod.	489.3	1.81	211.7	2.34	681.4	1.59	929.1	1.13	1,355.6	1.27	1,302.2	1.21	1,461.8	1.27	1,553.6	1.22
Dairy prod.	540.9	2.02	203.2	2.25	1,009.1	2.35	1,087.6	1.32	1,245.2	1.16	1,174.7	1.09	1,350.5	1.17	1,323.9	1.04
Fish & fish prod.	241.8	0.90	90.6	1.00	255.0	0.59	490.4	0.59	649.2	0.61	715.5	0.67	736.6	0.64	749.3	0.59
Hides, skins & furs	442.5	1.65	118.0	1.30	304.4	0.71	337.4	0.41	515.3	0.48	433.2	0.40	565.0	0.49	593.9	0.47
Cereals	1,840.1	6.89	368.8	4.08	3,437.6	8.03	2,808.4	3.40	3,380.8	3.16	2,935.1	2.74	3,140.6	2.73	3,362.8	2.64
Feeding stuff	71.9	0.27	21.0	0.23	120.4	0.28	202.3	0.25	344.7	0.32	252.7	0.24	354.9	0.31	328.9	0.26
Fruits, veg. & prep.	548.9	2.05	252.5	2.79	863.8	2.01	1,381.3	1.67	1,866.6	1.74	1,749.5	1.63	1,760.4	1.53	1,863.0	1.46
Coffee, tea, cocoa & spices	662.0	2.47	241.4	2.67	1,091.7	2.54	2,348.6	2.85	2,608.5	2.44	2,398.6	2.24	2,441.8	2.12	2,398.0	1.88
Sugar	541.3	2.02	114.2	1.26	823.0	0.92	525.1	0.64	751.5	0.70	652.7	0.61	593.7	0.52	716.2	0.56
Beverages	255.6	0.95	81.7	0.90	252.1	0.59	498.5	0.60	656.0	0.61	679.2	0.63	678.0	0.59	745.5	0.58
Fats & oils	474.6	1.77	152.8	1.69	938.0	2.18	793.5	0.96	1,266.8	1.18	1,100.3	1.03	1,290.4	1.12	1,284.9	1.01
Other food prod.	597.2	2.23	183.0	2.02	391.5	0.91	416.2	0.50	748.9	0.70	604.9	0.56	604.3	0.53	631.7	0.50
Other agricultural prod.	207.6	0.77	68.2	0.75	92.3	0.21	541.8	0.66	808.4	0.75	655.8	0.61	693.3	0.60	736.4	0.58
Tobacco (raw)	317.1	1.18	109.1	1.21	464.5	1.08	544.7	0.66	762.2	0.71	736.5	0.69	724.7	0.63	763.6	0.60
Natural fibers	2,848.0	10.63	936.9	10.36	2,891.2	6.73	3,145.2	3.81	3,767.4	3.51	2,932.3	2.73	2,554.7	2.22	3,149.3	2.47
Forest prod.	591.4	2.21	187.8	2.08	1,065.8	2.48	2,249.5	2.73	2,817.3	2.63	2,338.1	2.18	2,432.7	2.11	2,817.0	2.21

[a]Sources: (3, 51 and 52).

Table 1 (Continued)

Year / Commodity	1928		1933		1948		1952-54		1956-57		1958		1959		1960	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
TOTAL Agricultural Exports	10,664.8	39.81	3,340.9	36.93	14,681.8	34.18	18,299.6	22.18	23,539.4	21.98	20,661.3	19.26	21,383.4	18.58	23,018.0	18.05
TOTAL Non-Agricultural Exports	16,124.4	60.19	5,704.8	63.07	28,273.8	65.82	64,200.4	77.82	83,560.6	78.02	86,638.7	80.74	93,716.6	81.42	104,482.0	81.95
TOTAL World Exports[b]	26,789.2	100.00	9,045.7	100.00	42,955.6	100.00	82,500.0	100.00	107,100.0	100.00	107,300.0	100.00	115,100.0	100.00	127,500.0	100.00

[b] Excluding "Special Category" exports.

part of this increase in value of world exports is the result of higher prices since the volume of world exports has not increased at near the rate that the value measure has increased (see Table 2). This expansion is also partly accounted for by the great amount of economic aid provided by the United States to the rest of the world. Furthermore, a greater exchange of goods between European countries than at any previous time and a larger expansion of trade between the underdeveloped countries have contributed to the expansion of world exports and total trade (69, p. 31).

Upon a more close examination of the data in Table 1 one immediately observes that agricultural exports are decreasing in importance in value terms with respect to total world exports. Whereas the value of total world exports has grown at the annual rate of 5.0 per cent, the value of agricultural exports has increased at the annual rate of only 2.4 per cent over the years. The slack has been taken up by the increased trade in non-agricultural commodities which have increased in value at the annual rate of 6.0 per cent. One must keep in mind that these are value figures and that no valid inferences can be made about the changing volume of trade during these years. However, studies carried on by both Yates (69) and Thorbecke (40) have shown that both volume and unit prices of food and agricultural exports have failed to grow as rapidly as for total merchandise exports since 1913. Baldwin (6) deflated the value figures of international trade flows in an

Table 2. Growth in world exports 1928-1960[a] (millions of U.S. dollars f.o.b., index No. 1928 = 100, and per cent)[b]

Year	1928	1948	1956	1960	Per Cent Annual Growth 1928-1960
World exports of agricultural commodities (value)	10,665	14,682	23,539	23,018	2.44
World exports of non-agricultural commodities (value)	16,124	28,274	83,561	104,482	6.03
Total world exports (value)	26,789	42,956	107,100	127,500	5.00
Volume (index)	100	89	151	190	2.03

[a]Excluding "Special Category" exports.

[b]Source: (51, 52, 3, 19, 17).

attempt to partly offset the obvious incorrect volume picture given by current values alone (6). He concluded that because of the difficulties connected with deflation and because it did not alter substantially the results obtained with current value data, use of value figures was satisfactory for the purpose involved. The majority of the trade data used in this analysis will be represented in value terms unless specified otherwise.

Looking at this from yet another viewpoint, one can examine the change in the commodity structure as a share of total exports for each given year. When this is done one immediately sees that the importance of agricultural exports has decreased steadily through the years. Whereas agricultural exports compromised almost 2/5 of world exports in 1928, by 1960 they only accounted for less than 1/5 of total world exports. It is interesting to note that in comparing the years 1928, 1933, and 1948, world exports of agricultural products composed over 1/3 of total world exports, even though showing a relative decline of slightly more than 5 per cent during this time. By 1952-54 the share of agricultural exports dropped to slightly more than 1/5 of total exports and has continued to decline quite steadily the following years.

The decline of the structural importance of agricultural commodities in the world export market has been the result of many phenomena and their interaction. The principal causal factors appear to be:

1. A low income elasticity of demand Food products account for a very high percentage of agricultural products. There is a consistent relationship between size of per capita incomes and the amounts spend on food. As incomes increase people tend to shift away from carbohydrates and relatively low cost diets to higher cost diets containing such things as meats, dairy products and fruits and vegetables. There is a tendency for these increases in consumption to be less than proportionate to the income change. Studies have been carried out by Daly, Fox, Tintner and other noted economists with the resulting evidence all pointing toward the suggestion that most, if not all, foodstuffs have a declining income elasticity function based on real per capita income (23). Table 3 gives an idea of some of the quantitative estimates that have been made. Estimates of this income elasticity of demand vary with estimating techniques used, period of observation, algerbraic form and techniques used to derive the coefficients (23). Per capita consumption declines with per capita income growth for sugar, wheat and flour, beans and peas, and potatoes as shown by the negative elasticity coefficients at high levels of incomes. On the other hand, the income elasticities are rather high for some of the tropical foods such as beverages, which helps to explain the increase in volume of trade in tropical beverages relative to products like cereals. These coefficients help explain why there has been a decrease in world exports of many of the agricultural commodities. As per capita

Table 3. Income elasticity of demand for specific agricultural commodities in selected areas

Commodity	Elasticity Coef.
United States (23)	
Citrus fruits	.65
Beef	.40
Tomatoes	.40
All fruits	.32
Chickens and turkey	.30
Fresh green and yellow vegetables	.25
All meat	.25
All vegetables	.25
Pork	.20
Eggs	.15
Other fruit	.13
Fluid milk and cream	.12
Total milk equiv.	.10
Sugar	-.07
Wheat and flour	-.20
Dry beans and peas	-.20
Potatoes	-.25
Melons	-.40
North America (15)	
Coffee	.30
Western Europe (15, 44)	
Coffee	.50
Cocoa	.50-.70
Tea	.20-.50
Imported fruits and vegetables	.8

income increased in many of the countries of the world, relative demand for imports of some of the agricultural commodities with relatively low or negative elasticities has stagnated. Heady (23, p. 226) analyzed the situation in the following manner:

> While agriculture in total could not grow as rapidly as the non-farm economy, because of general consumer well being and because lower income elasticities for food, farm commodities with low demand elasticities could not absorb technical change as readily as those with high elasticities. Too, commodities such as eggs, potatoes and wheat use a relatively small proportion of the feed and soil resources adapted to them.

Thus we have a tremendous supply potential in many of the commodities with low to negative income elasticities, which, when coupled with the much less than proportional change in demand wrought by income changes, yields a surplus problem in the present net exporting areas or a movement towards self-sufficiency in home production in previous net importing areas. It is in this sense that we can attribute part of the declining demand for exports of agricultural commodities to the finite demands of the human stomach.

2. The tendency towards self-sufficiency The tendency towards self-sufficiency in many of the agricultural commodities in ever-increasing parts of the world is certainly providing a basis for the declining importance of agricultural exports relative to total world exports. The great improvements in farm technology which have taken place in the United States are a well-known fact. Other countries of the world, particularly those in Western Europe, are now undergoing similar

developments. Through the use of more capital intensive methods, output is growing in the agricultural sector with capital being substituted for labor. Thus, non-land resource costs (per unit of production) tend to move in a downward direction in the agricultural sector even though the use of technology may lead to higher land values and correspondingly higher rents. At any rate, a major reason for the relative decline of agricultural trade is the diminishing demand for imports of non-tropical goods, resulting from a more rapid growth of domestic output than of domestic consumption.

In speaking of the technological impact on agricultural commodities, one cannot ignore the processing end where technology has certainly reduced the waste of handling through better refrigeration methods, packaging and handling of foods. In some cases technology has even decreased the amount of the raw materials needed for the finished product through increased efficiency in manufacture.* Vertical integration in various food industries has also had an impact on the movement towards self-sufficiency through reduction of uncertainty and through increased efficiency from the processing standpoint. It seems that technology has been working at reducing demand for international trade in agricultural commodities by increasing production potential on the one hand and at the same time reducing

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*e.g. "30 per cent less green coffee is used to make a cup of new instant coffee than one of the regular roasted variety (44, p. 59)."

the physical amount of raw foodstuffs needed per physical unit of commercial processed foodstuffs. The impact of technology on the agricultural sector of many countries of the world today is resulting in an increased capacity within these countries for becoming self-sufficient in a number of agricultural commodities.

The impact of technology upon world agriculture has, in many cases, been given a big boost by national, internal and external economic policies. National policies used to stimulate this self-sufficiency were often aimed at such things as correcting a balance-of-payments situation, stabilizing farm incomes, or attaining more economic independence from the rest of the world. However, in many cases the means employed resulted in stimulating domestic production (45, Chapter II). The Western European countries have been examined in light of this autarkic movement with the conclusion that national policies leading towards agricultural protectionism in the industrialized world have discriminated against and as a result impeded the growth of exports of competing temperate-zone agricultural products such as cereals and animal products (for a thorough analysis see 19, 46).

3. The impact of economic development One cannot ignore the economic development in some of the primary producing countries. Stern relates the export earnings of these countries to the stage of economic development they are under-

going, the commodity composition of their exports and the amount of shelter they secure within the closely associated industrial markets (29). As these areas develop they begin to utilize some of these primary goods at home for the manufacture of industrial goods they previously had been importing. Thorbecke (39, p. 195) suggests

> The only inference which may be drawn at this time is that export earnings are influenced among other factors by the stage of development and the degree of preference enjoyed in foreign markets. For specific commodities and countries this preference may be of the utmost importance . . .

An interesting and at the same time very important sidelight to mention at this point is the emergence of Asia, and in particular India, as a net importer of cereals. India, who previously was a net exporter of cereals, has been forced to import food products as her population expanded much more rapidly than her production. As a result, an important world exporter of cereal products has withdrawn from the export market with the result that cereals have diminished greatly in importance with respect to total world exports.

The importance of the developing countries becomes a very significant factor to consider, particularly if regionalization of trade continues to grow in importance and agreements are made between the industrial countries and some of the developing countries as appears to be the case with the E.E.C. and her associate members in Africa. These agreements could well yield a considerable impact on future world trade patterns.

The decline in the structural importance of agricultural commodities to world trade has resulted in some interesting adjustments in the pattern of world trade. One of the more important changes in the pattern of world trade in agricultural commodities has been the increase in the United States competitive position. This change in the relative position of the United States as an exporter of agricultural commodities is discussed in the next chapter.

B. The U. S. Position in the Framework of World Trade in Agricultural Commodities

United States trade in agricultural commodities for the years 1928-1960 is shown in Table 4. The same 16 commodity groups used in Table 1 describing world trade are used here also. This enables one to examine and compare the U. S. position in light of the changing world position with regard to the exports of agricultural commodities.

The value of total United States exports in 1960 was four times the value of her exports in 1928. In examining this increase in terms of commodity composition of agricultural exports vs. manufactures exports, it is evident that the growth of exports of manufactures and non-agricultural materials has been considerably greater than that of the agricultural commodities. This is not unlike the world situation previously discussed and one would expect to find agricultural exports increasing at a slower rate than the other classifications

of exports. Table 5 summarizes these changes. Total United States exports have not increased as rapidly as the total world increases in exports in the time period analyzed. World exports have increased at an average annual rate of 5.0 per cent while United States exports have only managed to increase 4.4 per cent over the time period from 1928-1960. The United States has maintained a share of total world exports from 1928 to 1959 of approximately 17 per cent. This share of total world exports was largest in 1948 when the United States accounted for 24.5 per cent of total world exports (including "Special Catagories"). Since 1948 the United States' share of total world exports has decreased following the decline in the United States' share of world exports of the non-agricultural commodities (see Table 6). However, during this time her world share of exports of agricultural commodities has increased from 18.4 per cent in 1928 to 22.9 per cent in 1960. This increase in share is very evident when one compares the rate of annual increase of agricultural exports of the United States to the world rate. World exports of agricultural commodities have increased at an annual rate of only 2.3 per cent over the 32 year time span from 1928 to 1960. United States agricultural exports have increased at an annual rate of 3.1 per cent. The United States has gained an increasing share of the world agricultural export market at a time when it appears to be declining in structural significance.

Table 4. The commodity structure of United States exports of agricultural commodities 1928 to 1960[a] (millions of U.S. dollars and per cent)

Year	1928		1933		1948		1952-54		1956-57		1958		1959		1960	
Commodity	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Meat & meat prod.	67.7	1.32	25.5	1.34	56.8	0.45	57.5	0.38	104.3	0.53	85.8	0.48	109.2	0.63	129.7	0.64
Dairy prod.	18.5	0.36	4.0	0.24	210.0	1.68	93.8	0.62	147.9	0.75	198.4	1.12	144.0	0.83	124.7	0.61
Fish & fish prod.	20.8	0.41	7.4	0.44	22.8	0.18	16.3	0.11	21.8	0.11	19.4	0.11	26.7	0.15	25.6	0.13
Hides, skins & furs	50.5	1.00	17.3	1.03	42.2	0.34	59.7	0.39	95.6	0.48	86.8	0.49	95.8	0.55	115.6	0.57
Cereals	315.7	6.15	31.5	1.88	1,705.0	13.65	1,091.5	7.16	1,340.6	6.77	1,357.1	7.65	1,481.5	8.49	1,742.3	8.57
Feeding stuff	30.9	0.60	9.8	0.59	14.4	0.12	23.4	0.15	59.9	0.30	49.1	0.28	123.0	0.70	113.2	0.56
Fruits, veg. & prep.	150.3	2.93	75.0	4.48	299.0	2.39	258.2	1.69	382.7	1.93	395.1	2.23	397.3	2.28	404.1	1.99
Coffee, tea, cocoa & spices	4.4	0.09	2.0	0.12	11.0	0.09	18.5	0.12	22.6	0.11	21.9	0.12	23.7	0.14	25.6	0.13
Sugar	20.1	0.39	5.0	0.30	28.2	0.23	34.7	0.23	40.6	0.20	35.2	0.20	36.5	0.21	38.4	0.19
Beverages	2.2	0.04	0.7	0.04	26.7	0.21	11.9	0.08	8.2	0.04	8.1	0.05	6.3	0.04	6.2	0.03
Fats & oils	126.4	2.46	42.0	2.51	186.4	1.49	263.2	1.73	538.8	2.72	471.1	2.66	605.2	3.47	645.8	3.18
Other food prod.	10.3	0.20	3.0	0.18	104.7	0.84	104.3	0.68	290.4	1.47	89.1	0.50	106.8	0.61	101.9	0.50
Other agricultural prod.	23.8	0.46	9.9	0.59	45.1	0.36	62.6	0.41	91.1	0.46	67.3	0.38	91.7	0.53	88.0	0.43
Tobacco (raw)	179.2	3.49	89.6	5.35	286.4	2.29	296.0	1.94	347.3	1.75	354.4	2.00	346.2	1.98	378.4	1.86
Natural fibers	920.4	17.95	395.2	23.59	511.5	4.09	761.8	5.00	939.9	4.74	703.1	3.97	501.1	2.87	1,033.8	5.09
Forest prod.	17.6	0.34	7.4	0.44	93.5	0.75	127.5	0.84	206.5	1.04	178.0	1.00	213.1	1.22	300.7	1.48
Total Agricultural Exports	1,958.8	38.20	725.3	43.30	3,643.7	29.16	3,280.9	21.54	4,638.2	23.41	4,119.9	23.23	4,308.1	24.69	5,274.0	25.95
Total Non-Agricultural Exports	3,169.6	61.80	949.7	56.70	8,850.5	70.84	11,953.1	78.46	15,175.8	76.59	13,612.9	76.77	13,139.9	75.31	15,051.0	74.05
Total United States Exports[b]	5,128.4	100.00	1,675.0	100.00	12,494.2	100.00	15,234.0	100.00	19,814.0	100.00	17,732.0	100.00	17,448.0	100.00	20,325.0	100.00

[a]Source: (51, 52, 62, 64, 65).
[b]Excluding "Special Category" exports.

Table 5. Value of United States exports, 1928-1960[a] (millions of dollars and per cent)[b]

	1928	1960	% Annual Growth from 1928-1960
Total U. S. exports of agricultural commodities	1,958.8	5,274	3.14
Total U. S. exports of non-agricultural commodities	3,169.6	15,051	5.00
TOTAL U. S. EXPORTS	5,128.4	20,325	4.40

[a]Excluding "Special Category" exports.

[b]Sources: (62 and 64).

It is interesting to note that even though United States exports of manufactures and non-agricultural raw materials have increased at a higher rate than her agricultural exports they have not kept pace with the world growth rate, and consequently are now accounting for a smaller portion of the world trade in these areas. The declining share of America in the total world export market is the result of losing ground in world grade in manufactures commodities.

This, however, is a momentous problem in itself and will be ignored at this time. Table 6 shows how the United States share of world exports in agricultural commodities has changed over the years. It serves as the basis for several of the indices used in the analysis.

The share of a country in world trade as expressed in Table 6 is generally understood to be the ratio of the country's trade to world trade. A more meaningful way of measuring such a share would be to base this share on the goods the country actually does export. What one is interested in is the country's share of world exports in each commodity. In essence then, what is of importance is the commodity concentration of a country's exports. A single commodity concentration index can be established by using the Gini-Hirshman coefficient of concentration (25). Michaely adopted this technique and utilized it in the following manner (34):

$$C_{jx} = 100 \sum_{i} \sqrt{\frac{(X_{ij})^2}{(X_{\bullet j})^2}}$$

where C_{jx} = the coefficient of commodity concentration of exports of country j. X_{ij} = the value of country j's exports of commodity i. $X_{\bullet j}$ = the total value of world exports of country j. The upper limit of this index would be 100 and would result when all exports consist of a single good. At the other extreme would be a value of $\frac{100}{\sqrt{n}}$, where the country's exports are divided evenly among all commodities. Table 7

Table 6. The United States share of world exports of selected agricultural commodity groups for selected years 1928 to 1960[a]

Year / Commodity	1928	1933	1948[b]	1952-54	1956-57	1958	1959	1960
Meat & meat prod.	13.99	12.04	8.34	6.19	7.69	6.59	7.47	8.35
Dairy prod.	3.42	1.97	20.81	8.62	11.88	16.89	10.66	9.42
Fish & fish prod.	8.60	8.17	8.94	3.32	3.36	2.71	3.62	3.42
Hides, skins & furs	11.41	14.66	13.86	17.69	18.55	20.04	16.96	19.46
Cereals	17.16	8.54	49.60	38.87	39.65	46.24	47.17	51.81
Feeding stuff	42.98	46.67	11.96	11.57	17.38	19.43	34.66	34.42
Fruits, veg. & prep.	27.38	29.70	34.61	18.69	20.50	22.58	22.57	21.69
Coffee, tea, cocoa & spices	0.66	0.83	1.01	0.79	0.87	0.91	0.97	1.07
Sugar	3.71	4.38	3.43	6.61	5.40	5.39	6.15	5.36
Beverages	0.86	0.86	10.59	2.39	1.25	1.19	0.93	0.83
Fats & oils	26.63	27.49	19.87	33.17	42.53	42.82	46.90	50.26
Other food prod.	1.72	1.64	26.74	25.06	38.78	29.06	17.67	16.13
Other agricultural prod.	11.46	14.54	48.86	11.55	11.27	10.26	13.23	11.95
Tobacco (raw)	56.51	82.13	61.66	54.34	45.57	48.11	47.77	49.55
Natural fibers	32.32	42.18	17.69	24.22	24.98	23.98	19.61	32.83
Forest prod.	2.98	3.94	8.77	5.67	7.33	7.61	8.76	10.67
Total Agricultural Exports	18.37	21.71	24.82	17.93	19.70	19.94	20.15	22.91
Total Non-Agricultural Exports[c]	16.33		24.34	25.39	23.51	19.05	17.45	
Total United States Exports[c]	17.05		24.47	23.80	22.70	19.22	17.97	

[a]Sources: (3, 41, 51, 52, 54, 62, 64 and 65).

[b]Data for "Special Category" exports not available for 1960 and 1933.

[c]Including "Special Category" exports (See Appendix Table 3).

Table 7. Commodity composition of U. S. agricultural exports

Index	Year							
	1928	1933	1948	1952-54	1956-57	1958	1959	1960
C_{jx} (the coefficient of commodity concentration)	51.56	57.50	50.96	43.58	39.88	41.64	41.62	42.39

shows the commodity concentration index of United States agricultural exports over the years. The lowest possible coefficient which would result for the United States, using the 16 commodity grouping would be 25. The trend would appear to be towards less specialization in the agricultural products exported or in other words towards a more even division between values of commodities exported. Two important shortcomings of this index should be mentioned. First, the coefficient of commodity concentration is not adjusted for the degree of affinity among goods. Commodity groups are regarded as being equally different from each other when in fact there may be degrees of substitution between them. By using the 16 commodity group that has been used continuously throughout this analysis this error can be minimized relative to an analysis where individual commodities were used without any form of aggregation. Nevertheless this shortcoming must be recognized. Secondly, the use of catch-all groups may well bias the index towards indicating a higher commodity concentration than perhaps exists in the absence of the classifications (e.g. "other food products," "other agricultural products"). However, it seems that these shortcomings are not significant enough to distract from the general meaningfulness of the results.

This commodity concentration concept can now be incorporated into an index indicating a more significant measure

of a country's share in world trade. Michaely refers to this measure as the "commodity weighted share of country j in world trade" and defines this index in the following manner (32):

$$W_{jx} = 100 \sum_i \left[\frac{X_{ij}}{X_{i\cdot}} \quad \frac{X_{ij}}{X_{\cdot j}}\right]$$

where W_{jx} = the commodity weighted share of country j world exports over a given time span. X_{ij} = the exports of commodity i by country j. $X_{i\cdot}$ = the total world exports of commodity i. $X_{\cdot j}$ = the total exports of country j. This index reflects three basic factors. First of all, it reflects the commodity concentration of the country's exports. Secondly, it takes into account the size of the country's exports relative to world exports. Finally, it is affected by the relative size of world trade of each commodity group.* The upper limit of this index is again 100, which is the value when the country in question is the world's sole exporter in each of its export goods. The lower limit will be the simple ratio of the country's exports to world exports and would be reached upon the occasion of a

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$$*W_{jx} = \sum_i \left[\frac{X_{ij}}{X_{i\cdot}} \quad \frac{X_{ij}}{X_{\cdot j}}\right]$$

$$= \sum_i \left[\frac{X_{\cdot j}}{X_{i\cdot}} \quad \frac{X_{ij}}{X_{\cdot j}} \quad \frac{X_{ij}}{X_{\cdot j}}\right]$$

$$= X_{\cdot j} \sum_i \frac{1}{X_{i\cdot}} \quad \frac{(X_{ij})^2}{(X_{\cdot j})^2}$$

country having a distribution of its exports being in identical proportion to the distribution of world exports. In other words, 100 represents complete specialization in the export market while the lower limit, $\frac{X_{.j}}{X_{..}}$, represents a country completely unspecialized in its distribution of exports.

This index was used to study the commodity weighted share of United States trade in agricultural products. The analysis was restricted to the 16 commodity groups under analysis and measured as a function of total world exports of the individual agricultural commodities. The results of these calculations are shown in Table 8. One must keep in mind that this index is too narrow to measure the monopolistic position of a country as it is restricted to international trade alone and does not include trade within a country. On the other hand, one cannot treat the market being studied as a single unit since there are often many artificial barriers impaired which result in separating the market into several geographic units (34, p. 30). This is verified by the tendencies towards regionalization in world trade which seems to be taking place as indicated in Thorbecke's study (41).

Several inferences can be made from examining the data in Table 8. America is an important participant in the markets in which she does export. This is verified by the difference between the "simple share" of world trade and the "commodity weighted" share of world trade. From the previous analysis

Table 8. United States commodity weighted share in world trade in agricultural commodities[a]

Index	Year							
	1928	1933	1948	1952-54	1956-57	1958	1959	1960
W_{jx} (commodity weighted share)	28.74	39.93	37.70	29.69	30.77	33.21	34.16	37.69
Simple share	18.37	21.71	24.82	17.93	19.70	19.94	20.15	22.91

[a]Source: Tables 1 and 4.

of the degree of commodity concentration of United States agricultural exports we recall that the United States appeared to be moving away from specialization in agricultural exports. This should influence a downward bias in the commodity weighted share, causing it to approach more closely the simple share over the time period studied. This, however, is not the case. There appears to be a very gradual trend towards separation of these two indices over the years, a trend which is very much in evidence from 1956-1957 to 1960. This would seem to indicate that the U. S. is growing in importance or competitiveness in the markets for the agricultural goods which she does export.* This trend is especially in evidence if one compares the year 1928 to 1960. The commodity weighted share has grown by 9 per cent compared to a 4.5 per cent growth of simple share. This indices points up very vividly the importance of the United States as supplier in the world market for agricultural products.

It would now be of interest to compare the changing U. S. position in the structure of its agricultural exports in the light of the changes undergone throughout the world. Table 6 shows the share of world exports accounted for by the United

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*Balassa (5) has stated that two factors, the size of a country's exports and its commodity concentration tend to offset rather than reinforce each other, while the operation of the third factor, the size of world exports, is rather sporadic. When this is taken into consideration, the above conclusion seems to be quite valid since the relative rates of growth are taken into account in the simple share analysis.

States for each of the specified years. The significant point which one is immediately made aware of is that the U. S. has increased her share in total world exports of agricultural commodities since 1928. This becomes very significant when it is realized that during this time agricultural exports were decreasing in importance (per cent share) of world trade. A country's share of world trade may change as a result of one or a combination of two reasons: (1) A country's share of world trade in each group of commodities may remain the same, but the relative importance of the groups to world trade may change. This is referred to as a structural change in world trade. (2) The country's share of individual groups may change over time. This change shall be referred to as a competitive change. Tyszynski was one of the first economists to suggest that it was possible to isolate these two cases (43). He proposed to isolate the structural change by calculating a hypothetical share of a country's trade for year 2 assuming that the country had retained its year 1 share in the various commodity groups. The difference between this hypothetical share in year 2 and its actual share in year 1 is the share of trade lost or gained through the change of structure in world trade. Similarly, the difference between the hypothetical share and actual share in year 2 is the change brought about by a difference of competitiveness. This basic concept was used by Tyszynski, Svennilson, Spiegelglas and Baldwin to separate the effects (37, 35, 7). Baldwin's method of isolating

these factors may be expressed in the following manner:

$$\frac{\sum_{i}^{n} s_i^1 v_i^1}{V^1} - \frac{\sum_{i}^{n} s_i^0 v_i^0}{V^0} = \left[\frac{\sum_{i}^{n} s_i^0 v_i^1}{V^1} - \frac{\sum_{i}^{n} s_i^0 v_i^0}{V^0}\right] + \left[\frac{\sum_{i}^{n} s_i^1 v_i^0}{V^1} - \frac{\sum_{i}^{n} s_i^0 v_i^0}{V^1}\right] + \left[\frac{\sum_{i}^{n} s_i^1 v_i^1}{V^1} - \frac{\sum_{i}^{n} s_i^0 v_i^1}{V^1} - \frac{\sum_{i}^{n} s_i^1 v_i^0}{V^1} + \frac{\sum_{i}^{n} s_i^0 v_i^0}{V^1}\right]$$

where 0 and 1 designate the relative time periods, n is the number of commodity classes, s_i is the country's market share of any commodity group, v_i is the value for all countries of any commodity class, and V is the value for all countries of all agricultural commodity classes. The expression in the first group of brackets is that of the structural component. The difference between the terms in the second bracket (third and fourth terms) is the competitive component using beginning year weights while the terms within the third brackets constitute the interaction component.

This method was used to examine the changing position of the United States with respect to her world position as an exporter of agricultural commodities. Tables 1 and 4 were used as the source for the data involved and the analysis was restricted to the 16 classes of agricultural commodities designated. In order to gain the proper perspective towards this change in the U. S. position, world exports of agricultural commodities alone was used as the value represented by V. In this manner the changes in the U. S. position as a world exporter of agricultural commodities was made a function of

world changes in agricultural exports over the time period studied, rather than a function of changes in total world exports over time.

Table 9. The structural, competitive, and interaction factors causing a change in the United States trade position in agricultural commodities

Isolated Effects	Time Span			
	1928-1956-57	1928-1960	1952-54-1960	1956-57-1960
Structural change	-4.40	-2.55	-0.01	-0.28
Competitive change	+2.04	+3.81	+3.99	+3.61
Interaction effect	+3.69	+3.28	+1.00	-0.12
Total change in U. S. share of world exports of agricultural commodities	+1.33	+4.54	+4.98	+3.21

There is a fairly large negative structural effect when 1928 is compared to the late 1950's and 1960. This was more than compensated for by the United States increase in competitiveness for agricultural commodities as a whole. This structural effect is perhaps seen a little more clearly if one examines the trade pattern in the following manner:

$$\frac{\text{U. S. Ag. Exports}}{\text{World Ag. Exports}} \times \frac{\text{World Ag. Exports}}{\text{World Exports}} = \frac{\text{U. S. Ag. Exports}}{\text{World Exports}}$$

When several of the years examined by the study are compared

in this manner the declining position of U. S. agricultural exports within the total world export framework is very much in evidence as seen in Table 10.

Table 10. United States agricultural exports as a percentage of total world exports[a]

	Year			
	1928	1952-54	1956-57	1960
U. S. agricultural exports / Total world exports	7.31	3.98	4.33	4.14

[a]Excluding "Special Category" exports (Sources: Tables 1 and 4).

In Table 8 it was observed that the U. S. share of world agricultural exports was growing higher, yet when multiplied times the share of total world exports taken by agricultural commodities, the result shows one of declining importance of U. S. agricultural exports in world trade. This gives an indication of the strength of the negative structural decline of agricultural exports on the world market. It also substantiates the results of Table 9 which showed the U. S. gaining ground in the world market through increased competitiveness in the face of a declining structural movement within the same world market with regard to agricultural commodities.

One must, however, recognize the limitations of such an

analysis. Such calculations can be affected greatly by changes in classification of groups. These changes in classification are not nearly as prevalent in agricultural commodities as they are in manufactures. There are, however, certain catch-all classifications which may change, as far as contents are concerned, from year to year which lead to a certain amount of implicit error (e.g. "other food products," "other agricultural products"). Haberler has criticized this method of analysis as not being indicative of the total dimensions of the situation.* Haberler felt that a country is not necessarily more or less efficient or competitive merely because its share of world trade in a commodity changes. This critique has its merits, particularly in cases where the change may be due to the fact that there are young countries in the world whose population, total output and total trade grow faster than a "stagnant" country, without a faster relative growth of per capita output taking place. While the results of this kind of manipulation must be viewed with caution, the general inferences made by this index can lead to a better and more full understanding of a country's changing share in world trade over a given time span. The structural changes noted in the analysis can be attributed to the tendencies towards self-sufficiency by many of the countries of the world coupled with the disappearance from the world

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*Haberler made this point when introducing Baldwin's paper (see 7).

export market of countries such as India who have become net importers of agricultural products as a result of tremendous population pressures. The United States gain in competitiveness in agricultural commodities can be attributed to the tremendous impact of technology on production, utilization and transportation of the various agricultural commodities. United States exports of agricultural commodities have also been aided, particularly in the 1950's, by the various government disposal programs. These programs have undoubtedly aided the competitive advancement of the United States in her exports of various agricultural commodities.

Up to this point the effects of the United States government programs has been ignored completely. These government programs, particularly P. L. 480 have worked in the direction of trade expansion. The value of these programs per commodity group is shown in Table 11. Cereals has accounted for over 1/2 of the value of these programs since their beginning. Natural fibers, fats and oils and tobacco fall next in importance and between them account for the bulk of the total value of these programs. An element of short-term aid is involved in these programs since these commodities are made available to importing countries at prices below domestic costs of production. However, these programs can also be trade diverting to the extent that they divert demand to the commodities being disposed of which could in fact have been satisfied by commercial exports from competing sources of supply.

The important thing to consider here is the effect of these programs on the U. S. position in world trade of agricultural commodities. Upon examination of Table 11 it is interesting to note that U. S. agricultural exports, as a percentage of world exports, is higher in both 1956-57 and 1960 than in 1952-54. This difference can be attributed to the influence of our government programs, among which P. L. 480 plays a leading part. The question which immediately arises is whether these programs have in effect created the competitive advantage in the world market the United States seems to enjoy. In an attempt to remove the influence of the government programs upon the United States position, the value of these exports was subtracted from the values of United States exports per commodity group and also from the world export values per commodity group. The index measuring the degree of change in the share of world trade attributed to the structural, competitive and interaction components was again utilized to see if these programs had worked towards creating a more advantageous competitive position for the United States. The results of these calculations are shown in Table 12.

With the government programs deleted, the United States share of world agricultural exports actually declined between the years 1928 to 1956-57 and 1928 to 1960. This decline, greatest from 1928 to 1956-57, is the result of the large amount of United States agricultural commodities which were exported under United States government disposal programs

Table 11. United States exports of agricultural commodities financed under government disposal programs (millions of dollars and per cent)[a]

Commodity	Year					
	1956	1957	(ave.) 1956-57	1958	1959	1960
Meat and meat prod.	21.7	19.2	20.5	3.5	1.5	0.35
Dairy prod.	190.5	167.8	179.2	126.4	72.7	57.3
Fish and fish prod.	--	--	--	--	--	--
Hides, skins and furs	3.5	2.7	3.1	3.6	3.2	2.3
Cereals	868.2	834.3	851.3	677.6	801.8	983.1
Feeding stuff	--	--	--	--	--	--
Fruits, veg. and prep.	27.2	20.3	23.8	8.5	3.5	1.9
Coffee, tea, cocoa and spices	--	--	--	--	--	--
Sugar	--	--	--	--	--	--
Beverages	--	--	--	--	--	--
Fats and oils	158.6	144.7	151.7	126.5	135.1	115.6
Other food prod.	0.85	0.80	0.83	0.4	0.4	0.5
Other agricultural prod.	11.4	8.7	10.1	3.2	9.5	10.7

[a]Source: (61).

Table 11. (Continued)

Commodity	Year					
	1956	1957	(ave.) 1956-57	1958	1959	1960
Tobacco (raw)	46.5	30.9	38.7	30.0	51.6	71.0
Natural fibers	333.8	375.2	354.5	277.6	208.1	191.8
Forest prod.	--	--	--	--	--	--
Total	1662.1	1604.6	1633.4	1257.1	1287.3	1434.5
Total exports of agricultural commodities under government programs as a per cent of total U. S. agricultural exports	36.17	32.09	34.04	30.51	27.56	27.19

Table 12. The structural, competitive and interaction factors causing a change in the United States trade position in agricultural commodities (with the value of government disposal programs removed from the data)

Isolated Effects	Time Span		
	1928-1956-57	1928-1960	1956-57-1960
Structural change	-2.57	-2.91	-0.33
Competitive change	-1.09	+1.48	+4.42
Interaction effect	-0.88	+0.85	-0.13
Total change in U. S. share of world exports of agricultural commodities	-4.54	-0.58	+3.96

after the war. These programs accounted for over 35 per cent of United States' agricultural exports in 1956-57. Since 1956-57 these disposal programs have decreased in importance relative to total United States agricultural exports. During this same period, the value of agricultural commodities has decreased by over 500 million dollars compared to a decrease of only 200 million dollars in United States government disposal programs. As a result, the total value of world exports of agricultural commodities is smaller in 1960 than in 1956-57 after the United States disposal programs have been deleted. This decline in value of total world exports of agricultural commodities from 1956-57 to 1960 coupled with an increase in the United States share of the world market in agricultural

commodities during the same time period accounts for the rate of growth of United States competitiveness from 1956-57 to 1960 (see Table 12). With the United States government disposal programs included, United States exports of agricultural commodities have risen by 600 million dollars from 1956-57 to 1960 while total world exports of agricultural commodities have declined by 500 million dollars. When the government programs are deleted United States exports of agricultural commodities have risen by 800 million dollars while total world exports of agricultural commodities have declined by only 300 million dollars (see Tables 1 and 4 and Appendix Tables 64, 65 and 66). The additional 200 million dollars growth in United States agricultural exports, which is in evidence when the disposal programs are deleted, increases the United States share of total world exports of agricultural commodities relative to the smaller decline in total world exports of agricultural commodities. This accounts for the increased competitive effect that arises in the period 1956-57 to 1960 when the government programs are deleted in comparison to the competitive effect evidenced when they are included in the calculations.

The increase in the competitive position of the United States as an exporter of agricultural commodities appears to have been greater when the government disposal programs are excluded. However, the United States share of total world exports of agricultural commodities declines considerably when

the disposal programs are removed from the data. This change in share influences the competitive, structural and interaction effects which are obtained when 1928 is compared to the late 1950's and 1960. The conclusion arrived at from this examination is that the government disposal programs have lent a trade expanding effect to the United States exports of agricultural commodities. These programs have yielded a more advantageous competitive position to the United States in the world market but undoubtedly have, at the same time, created a certain amount of trade diversion within the framework of world trade in agricultural commodities.

C. Analysis of World and United States Trade in Agricultural Commodities by Commodity Group

The previous analysis has been concerned with examining the export pattern of agricultural commodities on an aggregate basis. It is essential to go behind the highly aggregate figures and examine these various changes in light of the specific commodity groups. Tables 13, 14, 15, and 16 examine the changes of world and United States agricultural exports between the years 1928 and 1960. Tables 13 and 15 show the increase in value of each commodity group as a percentage of the value in 1928.* This total measure of the increase in

*The per cent total change is obtained by dividing the change in value over the specific time period by the value in the beginning year, e.g. $\frac{X_{t+n} - X_t}{X_t}$.

value is then used as the basis for calculating the annual percentage change over the 32 years from 1928 to 1960. This index is of value in pointing out how the growth, or lack of growth of the different commodity classes over the time span has influenced their respective share of total exports. It points out rather vividly that exports of agricultural commodities have not grown as fast as total trade and therefore lost their structural position. A comparison of Tables 13 and 15 points out the commodities where the United States has gained a competitive advantage. Tables 14 and 16 examine the annual change in the shares of specific agricultural commodities as a function of total world and United States exports respectively. The annual change (trend) in per cent share was calculated by dividing the difference between the percentage share of 1928 and 1960 by the number of years separating them. Along side this absolute annual change in per cent share the percentage annual change in the share was also computed by dividing the absolute annual change by the average percentage share over the period. The percentage annual change designates the proportionate rate at which a commodity class is changing its share in world trade over a given time period. Thus, it suffers from the weakness that it does not take into account the year-to-year fluctuations in a commodity's share of total world trade but merely describes the proportionate rate of change in world share of a given commodity class between two selected years. Nevertheless, the proportionate rate at which

Table 13. Growth rates in world exports of selected agricultural commodity groups 1928 to 1960[a] (millions of dollars and per cent)

Year Commodity Group	1928 (value)	1960 (value)	% Total Growth	% Annual Growth
Forest prod.	591.4	2,817.0	376.32	5.00
Feeding stuff	71.9	328.9	357.44	4.80
Coffee, tea, cocoa & spices	662.0	2,398.0	262.23	4.10
Other agricultural prod.	207.6	736.4	254.72	4.00
Fruits, veg. & prep.	548.9	1,863.0	239.40	3.90
Meat & meat prod.	489.3	1,553.6	217.51	3.68
Fish & fish prod.	241.8	749.3	209.88	3.60
Beverages	255.6	745.5	191.67	3.40
Fats & oils	474.6	1.284.9	170.73	3.15
Dairy prod.	540.9	1,323.9	144.75	2.77
Tobacco (raw)	317.1	763.6	140.81	2.75
Cereals	1,840.1	3,362.8	82.75	1.88
Hides, skins & furs	442.5	593.9	34.21	0.92
Sugar	541.3	716.2	32.31	0.88
Natural fibers	2,848.0	3,149.3	10.58	0.30
Other food prod.	597.2	631.7	5.78	0.20
Total Agricultural Exports	10,664.8	23,018.0	115.83	2.34
Total Non-Agricultural Exports	16,124.4	104,482.0	547.97	6.00
TOTAL EXPORTS[b]	26,789.2	127,500.0	375.93	5.00

[a]Sources: (3 and 52).

[b]Excluding "Special Category" exports.

Table 14. The percentage share of total world exports of selected agricultural commodities[a] (percentages based on value terms)

Year Commodity Group	1928 %	1952-54 %	1960 %	Percentage Annual Change	Annual Change (Trend)
Forest prod.	2.21	2.73	2.21	------	------
Feeding stuff	0.27	0.25	0.26	------	------
Fish & fish prod.	0.90	0.59	0.59	-0.131	-0.010
Coffee, tea, cocoa & spices	2.47	2.85	1.88	-0.83	-0.018
Other agricultural prod.	0.77	0.66	0.58	-0.88	-0.006
Fruits, veg. & prep.	2.05	1.67	1.46	-1.03	-0.018
Meat & meat prod.	1.81	1.13	1.22	-1.218	-0.018
Fats & oils	1.77	0.96	1.01	-1.48	-0.021
Beverages	0.95	0.60	0.58	-1.53	-0.012
Dairy prod.	2.02	1.32	1.04	-2.00	-0.031
Tobacco (raw)	1.18	0.66	0.60	-2.03	-0.018
Cereals	6.89	3.40	2.64	-2.79	-0.133
Hides, skins, & furs	1.65	0.41	0.47	-3.48	-0.037
Sugar	2.02	0.64	0.56	-3.57	-0.046
Natural fibers	10.63	3.81	2.47	-3.89	-0.255
Other food prod.	2.23	0.50	0.50	-3.98	-0.054
Total Agricultural Commodities	39.81	22.18	18.05	-2.35	-0.680

[a]Source: (Table 1).

Table 15. Growth rates in United States exports of selected agricultural commodity groups 1928 to 1960[a] (millions of dollars and per cent)

Year Commodity Group	1928 (Value)	1960 (Value)	% Total Growth	% Annual Growth
Forest prod.	17.6	300.7	1,608.52	9.16
Other food prod.	10.3	101.9	889.32	7.65
Dairy prod.	18.5	124.7	574.05	6.12
Coffee, tea, cocoa & spices	4.4	25.6	481.81	5.66
Cereals	315.7	1,742.3	451.88	5.48
Fats & oils	126.4	645.8	410.92	5.24
Other agricultural prod.	23.8	88.0	269.74	4.18
Feeding stuff	30.9	113.2	266.34	4.16
Beverages	2.2	6.2	181.82	3.25
Fruits, veg. & prep.	150.3	404.1	168.86	3.13
Hides, skins & furs	50.5	115.6	128.91	2.63
Tobacco (raw)	179.2	378.4	111.16	2.38
Meat & meat prod.	67.7	129.7	91.58	2.06
Sugar	20.1	38.4	91.04	2.06
Fish & fish prod.	20.8	25.6	23.08	0.64
Natural fibers	920.4	1,033.8	12.32	0.35
Total Agricultural Exports	1,958.8	5,274.0	169.25	3.15
Total Non-Agricultural Exports	3,169.6	15,051.0	374.85	5.00
TOTAL U.S. EXPORTS	5,128.4	20,325.0	296.32	4.50

[a]Sources: (52 and 64).

[b]Excluding "Special Category" exports.

Table 16. The percentage share of total United States exports of selected agricultural commodities[a] (percentages based on value terms)

Year Commodity Group	1928	1952-54	1960	Percentage Annual Change	Annual Change (trend)
Forest prod.	0.34	0.84	1.48	+3.96	+0.036
Other food prod.	0.20	0.68	0.50	+2.57	+0.009
Dairy prod.	0.36	0.62	0.61	+1.67	+0.008
Cereals	6.15	7.16	8.57	+1.03	+0.076
Coffee, tea, cocoa & spices	0.09	0.12	0.13	+0.91	+0.001
Fats & oils	2.46	1.73	3.18	+0.82	+0.023
Beverages	0.04	0.08	0.03	-----	-----
Feeding stuff	0.60	0.15	0.56	-0.17	-0.001
Other agricultural prod.	0.46	0.41	0.43	-0.23	-0.001
Fruits, veg. & prep.	2.93	1.69	1.99	-1.18	-0.029
Hides, skins, & furs	1.00	0.39	0.57	-1.67	-0.013
Tobacco (raw)	3.49	1.94	1.86	-1.91	-0.051
Sugar	0.39	0.23	0.29	-2.07	-0.006
Meat & meat prod.	1.32	0.38	0.64	-2.14	-0.021
Fish & fish prod.	0.41	0.11	0.13	-3.33	-0.009
Natural fibers	17.95	5.00	5.09	-3.49	-0.402
Total Agricultural Commodities	38.20	21.54	25.95	-1.19	-0.383

[a]Source: (Table 4).

a commodity class was changing in its share of total trade gives, perhaps, the best measure of the advantage or disadvantage which it conferred upon the countries in their competition for a share of world trade (3).

1. Natural fibers

One of the most significant developments over this time span is the drastic change of natural fibers in the world export market. Its growth from 1928 to 1960 has been so slight it is almost inconsequential. Its share in world trade has dropped from 10.6 per cent to 2.5 per cent or a negative percentage annual change of 3.89. The change in world importance of natural fibers to the export market has been paralleled by the same occurrence in the United States. Natural fibers, accounting for 17.9 per cent of total United States trade and almost 1/2 of United States agricultural exports in 1928, accounts for only 5 per cent in 1960. This is a percentage annual change of -3.49.

Cotton and wool account for the great bulk of the foreign trade in natural fibers. Besides these two, there are silk, jute, hemp, flax, sisal and other agave fibers. The general impression left from this examination of natural fibers is one of stagnation and decline. Only wool, produced in a temperate climate with wide open grasslands, has held its own. This environmental characteristic eliminates most of the underdeveloped countries which do not have such regions. Cotton

trade has declined severely in the post-war era. This is the result of declining demand in the U. K., Japan, and Europe. Up until 1938 the increased purchases by Japan counterbalanced the decline in Europe and the U. K. However, since World War II Japan has been importing less than 2/3 of the pre-war amount and this demand for cotton seems to be settling at a new lower level (69, p. 111). The volume of exports in the miscellaneous fiber group has declined over the years with sisal alone improving its position.

These factors play a part in explaining the possible reasons for this decline. First of all, there has been a strong and increasing competition against fibers from synthetics; rayon and nylon have supplanted cotton, cordage nylon has supplanted natural fiber in rope manufacture, and sacking material is facing increasing competition from paper manufactures. Secondly, with the advent of technology, new methods and machines have been developed which no longer demand the use of fiber manufactures.* Finally, much of the increased demand for fibers has come from countries growing their own fibers, thus reducing the flow of exports of fibers across international border.**

The United States share of fibers consists almost completely

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*e.g. Combines are replacing binders and the need for twine, wire rope is replacing cordage, and paper bags are replacing cloth bags.

**This has happened in the United States and in India, particularly with respect to cotton.

of its cotton exports. It is evident that the decline in exports of cotton has been the result of a declining demand from U. K., Japan and Europe as well as an increased demand at home as the cotton manufacturing industry within the U. S. has expanded over the years.

2. Cereals

Cereals have declined considerably in their importance to total world exports over the time period studied. Cereals share in world trade dropped from 6.9 per cent to 2.6 per cent for a percentage annual change of -2.79.

Wheat, rice and maize account for the major portion of world exports of cereals. The most conspicuous change in the wheat trade is the movement of the non-industrialized countries from that of a net exporter to a net importing position which is generally the result of rising population pressures. This movement coupled with a move towards self-sufficiency in Western Europe explains the slow rate of growth of wheat on the world import market.

The chief importing countries for maize have been the U. K., Germany, Netherlands and Belgium. Quantities traded showed a rising trend through the 1930's reaching the record level of 13.1 million tons in 1937. Since World War II the volume has been considerably below the 1913 level. This is perhaps the result of the replacement of maize by other home-grown coarse grains, the disappearance of the Netherlands and

Belgium-Luxembourg imports for re-exports, and a general decline in U. K. consumption. The interesting thing to note is that the United States has become the chief world supplier of maize, contributing 1/2 of total world exports. Actually world trade in maize concerns rather few countries at present with the United States and Argentina playing the major roles. There is the distinct possibility that there will be increased competition from some of the underdeveloped countries in Africa which could provide a threat to the present United States position.

A number of intra-regional shifts have taken place in the world rice trade with the result that the world's rice trade is concentrated in two areas, a relatively small area consisting of United States exports to other western hemisphere countries and the major pattern of intra-regional trade between the countries of the Far East. Asia is still the major rice supplier of the world, but her export surplus appears to be dwindling while exports from the United States appear to be on the increase.

The United States trade position in world exports of cereals is quite unique. During this 32-year period the United States has increased the value of her cereal exports by some 4 1/2 times, resulting in the emergence of cereals as the undisputed leader in United States exports of agricultural commodities. Cereals accounted for 8 1/3 per cent of United States total exports in 1960 in comparison to only 6 per cent in 1928. The United States increased her share in the total world market

during a time when the importance of cereals (per cent share of world total) was on the decline in the world markets. A certain amount of this tremendous expansion can be attributed to P. L. 480 and other United States government programs which accounted for over half of the value of United States exports of cereals from 1956-57 to 1960 (see Table 11). It is, of course, true that some of these surplus grains do replace wheat that would otherwise have been consumed by the normal commercial demand. As a result it is difficult to determine just what the relative position of cereals would have been without the effect of government programs. One can be fairly certain that the growth of United States exports would not have been so phenomenal had it not been for these government programs. At any rate, the United States expansion of her world share of exports in cereals, from 17.2 per cent to 51.8 per cent over the 32 years, is perhaps the most important factor in explaining how the United States has been able to increase her world competitiveness in agricultural commodities as a whole.

3. Hides and skins

This is another group of agricultural commodities which has been declining in importance in international trade. Yates pointed out that unit prices of hides and skins have increased some 3 1/2 times during the period from 1913 to 1953. This would indicate that even though there has been a value increase

there is an implied fall in physical quantity (69, p. 110). One reason for this lack of growth would be the result of the diminished intra-European trade. This diminished trade in the Western European market coupled with an increased use of synthetics in the industrialized countries is causing the market for hides and skins to dwindle. Another possible reason for this decline is tied up in the lack of consistent quality of hides and skins originating in the underdeveloped countries of the world. Although this is a characteristic which undoubtedly can be improved upon through quality supervision, it will take time to improve the quality both on the range and in the processing end, during which time hides and skins will continue to be substituted for by consistent high quality synthetics.

During this time the United States, although still a net importer, has increased in importance as an exporter on the world scene accounting for 20 per cent of world exports in 1960 compared to only 11 per cent in 1928. Even though the United States has increased her world share in the hides and skins market the increase in competitiveness hasn't been great enough to compensate for the structural decline which has taken place. Japan, Western Europe and Canada are the principal markets for United States exports of hides and skins; however, increased use of synthetics in these areas will tend to curtail future increases in the demand for hides and skins. With the prospect of self-sufficiency looming larger and larger in the Common Market countries, accompanied by increasing

competition from previously underdeveloped countries, the future prospects for United States exports of hides and skins do not appear to be at all favorable (69, p. 75).

4. Animals and animal products, edible

In discussing the commodity group of livestock products one is dealing with an extremely heterogeneous group. The principal components include meats and meat products, dairy products and live animals. This heterogeneity characteristic makes classification of commodities very difficult and lends certain inconsistencies to the data involved. However, certain general observations can be made.

The value of world exports of meat have increased approximately threefold in the period 1928 to 1960. This small amount of growth relative to total world exports has caused meat products' share in world trade to decline in importance from 1.8 per cent to 0.2 per cent or a percentage annual change of -1.22. This decline in world share is due in part to the declining trade in beef and veal products. This is the result of a slight fall in supplies from Argentina coupled with prices which have been higher than those ruling for pig meat and mutton. Trade in canned and processed meats along with certain pork products have increased in importance in the trade of meats. The principal importer of meat was, and still is, the U. K. However, British home meat production has risen at about the same rate as her population demand. She is importing less

beef, more lamb and much more bacon and ham than in the 1920's. As far as the rest of the markets concerned, the major demand seems to lie in beef and pig meat, particularly in canned form. All things considered, the decline in importance of meat products can be traced to a growing ability of the U. K. and Western Europe to supply more and more of their own domestic demand.

The value of dairy products exported on the world scene has little more than doubled over the 32 years studied. All countries of the world produce some milk but less than 15 are substantial continuous exporters of dairy products (69, p. 118). Even a smaller number of countries are continuous importers and a very few countries shift from a net export to a net import position depending on domestic milk production. The lack of growth of dairy products is perhaps the result of encouraged expansion in domestic milk production and the output of manufactured dairy products in an attempt to reduce dependence on foreign suppliers. The U. K. dominates the world situation, being the only large and relatively free international dairy product market in the world, taking approximately 2/3 of world exports. The most important occurrence in the trade of dairy products has been the enormous increase in world trade in dried milk since the pre-war period.* In that same period the value of butter has increased an inconsequential

*Dried milk exports increased from 71.5 million pounds in 1934-38 to 924.9 million pounds in 1955.

amount while the value of cheese exported has increased only some 50 per cent since the pre-war period. The most noteworthy event has been the rise in New Zealand exports of dairy products along with increased exports from Denmark, the Netherlands and the United States.

The United States world export position in animal products is characterized by differing trends in meats and dairy products. In the meat export market the United States has lost ground, accounting for only 8.3 per cent of the world market in 1960 compared to 14.0 per cent of the market in 1928. Exports of meat have declined from 1 1/3 per cent to 2/3 of one per cent of total United States exports over the same period. This decline in meat exports (United States) can be traced directly to the expansion of trade in meats by Northwest Europe and Australia-New Zealand. This trend has been the result of a specialization in bacon and ham by the European countries and special marketing arrangements between the U. K. and Australia-New Zealand.

The increase in the United States share of the world market in dairy products can be attributed to its phenomenal growth in the production and the trade of dried milk. The increased trade in dried milk, coupled with the influence of P. L. 480 and other government programs, has made United States trade in dairy products much more significant. Perhaps one of the largest handicaps to the competitiveness of United States dairy products on the world market has been the higher domestic wholesale price levels in the United States when compared to the

major dairy-product exporting countries. Until world prices rise substantially relative to United States prices, United States suppliers will find it difficult to compete in the international markets without assistance from the federal government. For evaporated and dry whole milk the situation appears to be worsening in terms of relative prices. This trend is reflected in the declining United States share of world exports from 1956-57 to 1960 with the exception of 1958.

In examining the whole picture in the trade of livestock products, trade appears to be concentrated in the Western European countries, Argentina and Australia-New Zealand. It seems to be centered around the U. K. market, which appears to be stabilized at its present levels. This could change as the result of a rising demand above local production possibilities and capacities in certain of the now underdeveloped countries. However, the prospects are that the trade will continue for some time in its present channels.

5. Fats and oils

Fats and oils also declined in relative importance in the world export market accounting for only 1 per cent of trade in 1960 as compared to almost 2 per cent in 1928. This again is another case where increase in value of the exported product was not proportional to the increase in the volume of total exports. Marked changes have taken place within the industry as cottonseed, rape, sesame, and linseed have declined in

importance, olive oil remained stationery and copra, palm oil, groundnuts, soybeans and palm kernels increased in importance in world trade. The principal markets are in Europe and the U. K. as is true with most of the agricultural commodities.

The emergence of the United States as a net exporter of fats and oils is perhaps one of the most significant occurrences within the industry. This increase in the United States share of the world export market, from 26.6 per cent to 50.3 per cent over the 32-year span from 1928 to 1960 is largely explained by her highly mechanized production of soybeans, peanuts, linseed and cottonseed. Fats and oils accounted for over 3 per cent of United States total exports in 1960 and appears to be increasing in importance relative to both world share and United States total exports. Increased competition may be in the offing from the African countries who seem to be increasing their share of the world market at the expense of South American and Asian producers.

6. Fruits and vegetables

This particular group of commodities is so heterogeneous that a rigid analysis of changes in the industry would be a momentous task. It is possible, however, to make some general observations. Thorbecke and Condliffe noted that there has been a great expansion in volume traded in fruits and vegetables but that depressed prices kept the world share from rising (40, p. 181). This decrease in world share is verified by Table 14. This points out the decrease in world share of fruits and

vegetables from slightly over 2 per cent in 1928 to slightly under 1 1/2 per cent in 1960.

The United States share in world trade of fruits and vegetables has declined from 27 per cent of world exports in 1928 to around 20 per cent in the late 1950's to 1960. This is the result of new producers such as Israel, Algeria, Morocco and the Union of South Africa entering the market in the past few years. The United States is still the largest world market for bananas and one of the chief suppliers of raisins, currents and citrus fruits. Europe and the U. K. provide the other significant marketing areas. Again, except for the banana trade, it would appear that the African countries are expanding their trade at the expense of the countries of South America.

New transportation techniques, refrigeration, better preparation techniques and more efficient plant disease control have interacted to widen the supply potential of world production as spoiling and disease are being held to a minimum and in some cases almost completely eliminated. The benefits of these advancements have occurred primarily to the Mediterranean and Central American countries.

7. Coffee, tea, cocoa

The tropical beverages increased in export volume almost four times over the studied time span. This placed them near the head of the list of commodities when ranked according to

growth of exports over the 32 years from 1928 to 1960. Much of this growth was the result of increased demand for coffee in the United States and, as of the early 1950's, in Europe. Per capita consumption of coffee has leveled off in the United States since the early 1950's while in Europe the per capita consumption of coffee is still relatively low, leaving the prospects for future growth there in a favorable position. Imports of cocoa beans also were on the increase in Western Europe, while the reverse seemed to be true in the United States.

Tea maintained its resiliency over the time period in both trade pattern and volume. The Western European market is still the major net importing region while the major suppliers of tea are the net exporting areas in Asia.

The most significant occurrence in the trade of the tropical beverages is the emergence of Africa as the major coffee and cocoa supplier. This gain in world share is being made at the expense of the Latin American countries, whose share of world trade in these products has been suffering a decline over the past years. Thorbecke has attributed this African gain to the favored position held by the African countries as small producers selling in a protected market (40, p. 188). The African coffee industry was also shielded as the result of restrictive output policies followed by Brazil.

8. Tobacco

World exports of raw tobacco have increased from 317 million dollars in 1928 to 763 million dollars in 1960. This is a total growth in value exported of approximately 240 per cent or an annual growth rate of 2.8 per cent. This rate of growth is considerably less than the rate of growth of total exports and as a result, tobacco has decreased in importance to total world trade. Tobacco accounted for 1.2 per cent of total exports in 1928 in comparison to only 0.6 per cent in 1960. This is a percentage annual change of -2.03.

The United States was the major exporter of tobacco leaf prior to 1950. Since then the United States volumetric share of the world market has been decreasing as exports of leaf tobacco from its main competitors, Rhodesia-Nyasaland and India, have been constantly on the increase.

International trade in tobacco is heavily dependent upon the available supplies of the various types of tobaccos, prices and quality. The United States prices of leaf tobacco have been rising, relative to United States competitors. Also, there has been a deterioration in the quality of the United States leaf tobacco which has resulted from various attempts to increase the overall yield. This price-quality characteristic of United States leaf tobacco has caused many of the net importing countries to shift to different suppliers over the last decade. Nevertheless, the United States still remains the major source of supply of leaf tobacco for the importing

countries of the world.*

9. Forest products

This commodity group is the only one of any value significance that has maintained its percentage share in world trade over the 32 years studied. This phenomenal rate of growth can be attributed almost entirely to the expanded demand for wood pulp. This wood pulp has been needed to meet the growing paper requirements for the industrialized countries. This demand has been concentrated in the United States, the U. K., France, Germany, and Italy. Though the European countries and North America are each largely self-sufficient they both export and import considerable amounts of forest products. The United States has continually expanded its world share such that it now exports 10 per cent of the world's total in forest products. This increase has been obtained by ruthless cutting of the virgin forests. These virgin forests have been nearly used up and rigorous management practices are now being utilized in an attempt to maintain production of forest products.

10. Summary

The main conclusions that emerge from the preceding commodity analysis is that tropical products have fared relatively better than temperate zone products in terms of export earnings. Agricultural commodities as a whole appear to be

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*For a detailed analysis of international trade in tobacco see (67).

declining in importance as a result of stagnating values of products exported. Much of this decline can be attributed to the tendency of the European countries to attain self-sufficiency in production of agricultural commodities previously imported. The major markets for agricultural products have been located in Europe and the U. K. With the advent of the E.E.C., the trade patterns of the world may be altered considerably as these countries work towards developing themselves through economic integration. The final impact of the formation of the E.E.C. on several of the commodity trade patterns will depend in part upon the amount of economic aid and trade liberalizing concessions granted to the associated members in Africa in addition to the impact of the Common Agricultural Policy on Community output and the increase in income and agricultural requirements within the Six. The eventual impact of European economic integration on non-member suppliers of agricultural commodities appears to be directly related to the nature of the commodities supplied by the third countries. The United States-E.E.C. trade pattern in agricultural commodities is discussed in section D and provides additional basis for assessing the probable effect of European economic integration on future United States exports of agricultural commodities to the E.E.C. member countries.

D. The Pattern of United States-E.E.C. Trade in Agricultural Commodities

The pattern of trade in agricultural commodities between the United States and the Six has undergone important changes since 1928. The importance of the E.E.C. as a market for United States exports has declined relatively over this period, forcing the United States to seek new markets elsewhere. Total United States exports to the Six only account for 16.8 per cent of United States exports in 1962 compared to nearly 22 per cent in 1928. The commodity composition of these exports has changed also with agricultural commodities decreasing in importance over the 34 years. Agricultural exports accounted for 60 per cent of total United States exports to the E.E.C. member countries in 1928. By 1962 this share had fallen to 36 per cent (see Table 17). This decline has been consistent over the entire 34 years except for 1938 when agricultural commodities accounted for only 24.7 per cent of the United States exports to the Six. This erratic pattern which cropped up in 1938 can be attributed to the explosive European political scene which was beginning to unfold. Much of this decline in importance of the agricultural commodities in U. S. - E.E.C. trade can be attributed to the structural change which has taken place with respect to the position of agricultural commodities in world trade. The primary concern of this analysis is to determine whether there seems to be any evidence pointing towards a loss of competiveness by the United States

Table 17. The structure of United States-E.E.C. trade in agricultural commodities 1929 to 1962[a] (per cent)

Year	1928	1933	1938	1948	1952-54	1956-57	1959	1961	1962
Total U.S. agricultural exports as a percentage share of total U.S. exports	42.2	46.8	30.5	30.7	23.1	24.3	26.2	27.3	26.3
Total U.S. exports to the E.E.C. as a percentage share of total U.S. exports	21.9	24.8	15.3	19.8	11.0	15.1	13.6	17.0	16.8
The percentage share of total U.S. agricultural exports going to the E.E.C.	31.2	31.7	12.4	39.8	23.6	25.2	23.5	23.8	23.6
Total U.S. agricultural exports to the E.E.C. as a percentage share of total U.S. exports to the E.E.C.	60.0	59.8	24.7	56.7	49.8	40.4	45.5	38.3	37.0
Total U.S. agricultural exports to the E.E.C. as a percentage of total U.S. exports	13.2	14.8	3.8	12.2	5.5	6.1	6.2	6.5	6.2

Excluding "Special Category" exports.

[a]Sources: (62, 64, 65 and 66).

Table 18. United States exports of agricultural commodities to the E.E.C. by principal commodity group 1928 to 1962[a] (millions of dollars)

Year / Commodity Group		1928	1933	1938	1948	1952-54	1956-57	1959	1961	1962
Animals & animal prod.	(1)	53.1	17.9	2.9	122.3	32.4	48.9	57.2	78.0	84.6
(edible)	(2)	35.2	9.0	- 7.9	113.8	-23.2	-6.1	-5.8	18.5	
Animals & animal prod.	(1)	31.3	8.6	4.3	19.2	57.3	102.2	103.0	109.2	95.4
(inedible)	(2)	-47.5	-9.0	-10.3	3.4	20.2	46.7	14.7	5.3	
Vegetables & veg. prod.	(1)	122.0	34.2	86.1	1,051.1	282.4	382.9	410.0	488.3	574.9
(edible)	(2)	64.3	19.1	58.3	1,010.6	214.5	293.1	260.1	353.9	
Vegetables & veg. prod.	(1)	36.6	16.7	16.7	98.8	167.3	342.1	356.7	385.4	418.1
(inedible)	(2)	- 5.2	-0.2	3.7	78.8	123.2	295.5	292.0	326.2	
Natural fibers	(1)	431.0	170.3	65.6	235.2	288.9	329.6	139.7	274.4	140.3
	(2)	422.3	168.1	63.1	222.9	269.8	308.0	119.3	251.0	
Wood (unmanufactured)	(1)	1.0	0.4	1.0	0.4	2.4	2.4	3.6	7.3	11.1
	(2)	1.0	0.1	0.4	-1.1	1.9	2.1	2.8	6.1	
Total Agricultural Exports	(1)	675.1	248.2	176.6	1,527.0	830.6	1,208.1	1,070.3	1,441.4	1,324.4
	(2)	470.1	187.1	105.3	1,428.4	606.4	939.3	683.1	961.0	

(1) Total U.S. exports to the E.E.C.
(2) Net U.S. exports to the E.E.C.

[a]Sources: (62, 63, 64, 65 and 66).

in the Common Market countries given the previously analyzed structural changes in the world market over the time period studied.

Table 18 shows the value of exports and net exports of the United States to the E.E.C. member countries by major commodity group. Total net exports have followed a trend similar to the one describing the flow in total agricultural exports. In examining the various commodity groups, several observations can be made concerning trends within the various groups. Significant increases in both net and total exports over the years from 1928 to 1961 have taken place in both the edible and inedible classifications of vegetable and vegetable products. Textile fibers have decreased in importance since 1928, with the fluctuations that appear in the 1950's being caused by price fluctuations on the world market. These three groups of commodities account for the majority of trade flows between the United States and the E.E.C. Animals and animal products have increased over the years, but still do not account for much more than 1/5 of United States exports to the E.E.C. There has been a significant increase in edible meat exports to the Community in the latter part of the 1950's. This increase is the result of increases in exports of poultry meats. The inedible classification of animals and animal products appears to have increased more significantly than the edible classification over the 30-year period as the United

States moved from the position of a net importer in 1928 to that of a net exporter in the 1950's. These net exports reached a peak in the 1956-57 period and have been declining the succeeding years as United States exports have tapered off and held at a fairly constant level the last few years. As the E.E.C. becomes more capable of self-sufficiency in production of livestock, the United States will probably find itself losing more of the E.E.C. market in these commodities.

The individual commodity groups will be studied in more detail in an attempt to determine whether or not a change in United States competitiveness in this European market has taken place over the past 30 years. Tables 19 and 20 show the structural changes which have taken place in the world market, the changes in the competitiveness of the United States in the world market, and the importance of the Community market to United States agricultural exports per commodity group. These tables will be referred to during the discussion of the various groups and will provide the basis for determining the general direction in competitiveness taken by the various commodities in respect to international trade between the United States and the Common Market.

D. Animals and animal products, edible

The export patterns in edible livestock products have made some interesting and significant changes over the past 30 years. The relative position of this group as a whole has

Table 19. Structural changes in exports of selected agricultural commodities 1928 to 1960[a] (per cent)

Year Commodity Group	World Structure[b]		U.S. Share of Total World Exports		E.E.C. Share of Total U.S. Exports	
	1928	1960	1928	1960	1928	1960
Meat & meat prod.	1.81	1.22	13.99	8.35	11.88	32.69
Dairy prod.	2.02	1.04	3.42	9.42	1.07	8.32
Fish & fish prod.	0.90	0.59	8.60	3.42	13.97	7.42
Hides, skins, & furs	1.65	0.47	11.41	19.46	33.87	33.13
Cereals	6.89	2.64	17.16	51.81	22.36	15.87
Feeding stuff	0.27	0.26	42.98	34.42	55.35	30.57
Fruits, veg. & prep.	2.05	1.46	27.38	21.69	20.70	15.50
Coffee, tea, cocoa & spices	2.47	1.88	0.66	1.07	18.95	13.73
Sugar	2.02	0.56	3.71	5.36	9.46	8.06
Beverages	0.45	0.58	0.86	0.83	5.35	9.84
Fats & oils	1.77	1.01	26.63	50.26	29.95	34.53
Other food prod.	2.23	0.50	1.72	16.13	2.88	4.57
Other agricultural prod.	0.77	0.58	11.46	11.95	28.90	20.47
Tobacco (raw)	1.18	0.60	56.51	49.55	9.14	22.42
Natural fibers	10.63	2.47	32.32	32.83	45.56	32.40
Forest prod.	2.21	2.21	2.98	10.67	2.70	24.63
Total Agricultural Exports	39.81	18.05	18.37	22.91	29.20	23.65

[a]Source: (52, 64 and Tables 1 and 4).

[b]World exports of each commodity group as a percentage of total world exports.

Table 20. Structural changes in exports of selected agricultural commodities 1956-57 to 1960[a] (per cent)

Commodity Group	World Structure[b]		U.S. Share of World Exports		E.E.C. Share of U.S. Exports Per Commodity Group					
Year	1956-57	1960	1956-57	1960	1952-54	1956-57	1959	1960	1961	1962
Meat & meat prod.	1.27	1.22	7.69	8.35	27.91	20.28	31.97	32.69	43.22	46.46
Dairy prod.	1.16	1.04	11.88	9.42	12.34	13.55	10.61	8.32	2.31	4.26
Fish & fish prod.	0.61	0.59	3.36	3.42	4.55	4.68	5.46	7.42	8.75	8.50
Hides, skins & furs	0.48	0.47	18.55	19.46	26.62	32.68	31.75	33.13	28.85	29.41
Cereals	3.16	2.64	39.65	51.81	20.68	21.12	22.07	15.87	20.47	19.92
Feeding stuff	0.32	0.26	17.38	34.42	14.65	19.02	33.66	30.57	25.83	44.01
Fruits, veg. & prep.	1.74	1.46	20.50	21.69	12.26	18.41	15.04	15.50	17.77	21.29
Coffee, tea, cocoa & spices	2.44	1.88	0.87	1.07	10.47	12.24	13.92	13.73	6.90	8.30
Sugar	0.70	0.56	5.40	5.36	15.43	13.24	16.54	8.06	10.81	20.80
Beverages	0.61	0.58	1.25	0.83	11.14	3.12	5.04	9.84	10.08	10.72
Fats and oils	1.18	1.01	42.53	50.26	31.76	35.05	31.89	34.53	29.52	28.61
Other food prod.	0.70	0.50	38.78	16.13	8.85	12.53	13.95	4.57	13.90	16.44
Other agricultural prod.	0.75	0.58	11.27	11.95	24.44	29.79	24.38	20.47	25.89	27.35
Tobacco (raw)	0.71	0.60	45.57	49.55	22.02	21.70	22.32	22.42	23.50	25.87
Natural fibers	3.51	2.47	24.98	32.83	35.86	33.14	25.51	32.40	28.31	22.53
Forest prod.	2.63	2.21	7.33	10.67	12.27	14.18	17.48	24.63	19.46	22.48
Total Agricultural Exports	21.98	18.05	19.70	22.91	23.15	24.68	23.21	23.65	25.31	22.48

[a]Sources: (52, 62 and Tables 1 and 4).

[b]World exports of each commodity group as a percentage of total world exports.

been one of stagnation and decline with respect to total United States exports. Exports of edible animals and animal products have only increased some 50 per cent in value over the past 34 years and as a result account for only 1 1/2 per cent of United States agricultural exports in 1960 compared to 2 1/2 per cent in 1928. This group as a whole has suffered a structural loss in importance in international trade which is evidenced by the reduced size of the commodity's share in total world trade and also in total United States trade. The United States has suffered a loss in share of the world market in edible meat and meat products as exports from Argentina and Australia-New Zealand have proved to be more competitive on the world markets.

The Six have provided one of the major markets for United States exports of livestock products during the years from 1928 to 1962, accounting for approximately 1/4 of all United States exports of meat products in the early 1930's and early 1960's. The commodity concentration was centered around animal fats and oils with the Six absorbing 1/3 of all United States exports of animal fats and oils in the late 1920's and early 1930's. Exports of meats and meat products, the second most important constituent of this category were only 1/5 as large as the exports of fats and oils and accounted for 12-15 per cent of this particular commodity group. Together they accounted for 90 per cent of United States exports in livestock products to the Six. By the 1950's the position had changed

Table 21. United States exports of edible animal products to the E.E.C. 1928 to 1962[a] (millions of dollars and per cent)

Year / Commodity		1928	1933	1938	1948	1952-54	1956-57	1959	1961	1962
Animal & Animal Prod. (edible)		53.1	17.9	2.9	122.3	32.4	48.9	57.2	78.0	84.6
of which										
animals		——	——	——	——	——	——	0.3	0.6	0.8
meat & meat prod.		8.0	4.0	1.4	19.6	16.1	21.1	33.8	64.0	70.5
animal oils & fats		41.9	12.7	0.6	28.8	14.0	6.8	5.1	3.4	2.2
dairy prod.		0.2	——	——	45.8	1.0	18.4	10.2	2.0	3.5
fish & fish prod.		2.9	1.2	0.9	0.9	0.7	1.0	1.5	1.7	1.9
animal prod. n.e.s.		——	——	——	26.9	0.7	1.6	6.4	6.2	5.6
Animal & Animal Prod. (edible)	(1)	1.04	1.07	0.09	0.98	0.21	0.25	0.33	0.38	0.39
	(2)	2.45	2.28	0.31	3.19	0.92	1.02	1.26	1.38	1.51
	(3)	23.25	24.00	4.19	29.45	12.21	12.72	16.76	22.11	24.76
animals	(1)	——	——	——	——	——	——	——	——	——
	(2)	——	——	——	——	——	——	——	0.01	0.01
	(3)	——	0.95	2.63	4.76	0.31	——	1.12	3.32	4.89
meat & meat prod.	(1)	——	0.24	0.05	0.16	0.11	0.11	0.19	0.31	0.33
	(2)	0.37	0.51	0.15	0.51	0.46	0.44	0.74	1.13	1.26
	(3)	11.88	15.56	4.93	34.56	27.91	20.28	31.97	43.22	46.46
animal oils & fats	(1)	0.82	0.76	0.02	0.23	0.09	0.03	0.03	0.01	0.01
	(2)	1.89	1.62	0.06	0.75	0.40	0.14	0.11	0.06	0.04
	(3)	37.27	33.88	2.93	40.04	17.52	8.44	8.15	7.01	5.08
dairy prod.	(1)	——	——	——	0.37	——	0.09	0.06	0.01	0.02
	(2)	——	——	——	1.20	0.03	0.38	0.22	0.04	0.06
	(3)	1.07	——	0.27	21.83	12.34	13.55	10.61	2.31	4.26
fish & fish prod.	(1)	0.06	0.07	0.03	0.01	——	——	0.01	0.01	0.01
	(2)	0.13	0.16	0.10	0.02	0.02	0.02	0.03	0.03	0.03
	(3)	13.97	16.60	6.53	4.20	4.55	4.68	5.46	8.75	8.50
animal prod. n.e.s.	(1)	——	——	——	0.22	——	——	0.04	0.03	0.03
	(2)	——	——	——	0.70	0.02	0.03	0.14	0.11	0.10
	(3)	——	1.59	0.89	53.90	2.82	6.26	22.95	21.63	22.00

(1) Exports to the E.E.C. as a percentage of total U.S. exports.
(2) Exports to the E.E.C. as a percentage of total U.S. agricultural exports.
(3) Exports to the E.E.C. as a percentage of total U.S. exports of a given commodity group.

[a]Sources: (62, 64, 65 and 66)

considerably. Meats had become much more important and continued to grow in importance during the 1950's. Exports of edible animal fats and oils were on the decline as the Six began to supply more and more of their own livestock products. This increase in self-sufficiency is in evidence throughout the whole group of commodities with the exception of meat. Table 22 shows the sources of E.E.C. trade in meat and meat products by respective share for the 1950's and early 60's. Intra-trade between the members of the Community has been on a gradual increase during this time, particularly after the formation of the E.E.C. and the subsequent lowering of barriers to trade between the Six. This is an expected trend as France and the Netherlands increase shipments of livestock products to the other members. What is of significance to this analysis is the increase in the United States share of trade in meat and meat products to the E.E.C. at the expense of other third countries in the 1960's. This increase in meat exports from the United States can be attributed solely to increased trade in poultry products. Table 23 shows the volume of exports of meat flowing to the E.E.C. from the United States broken down according to type of product. Poultry exports accounted for 72 per cent of total United States meat exports to the E.E.C. in 1961 in comparison to only 9 per cent four years earlier in 1957. It is important to note that United States exports of other meat products have followed the general

Table 22. The origin of E.E.C. imports of meat and meat products (million U. S. dollars c.i.f. and per cent)[a]

Source		Year					
		1952-54	1956-57	1958	1959	1960	1961
United States	(1)	11.11	17.30	17.00	29.27	38.02	53.73
	(2)	11.8	8.4	7.1	10.3	10.6	16.2
Intra-E.E.C.	(1)	30.81	54.96	65.80	97.49	147.59	135.39
	(2)	34.5	26.7	27.6	34.3	41.2	40.7
Other countries	(1)	50.58	133.72	156.07	157.90	172.40	143.65
	(2)	53.7	64.9	65.4	55.5	48.2	43.2

(1) Value of imports
(2) Per cent share of total E.E.C. imports

[a]Source: (1).

Table 23. Commodity structure of United States exports of meat and meat products to the E.E.C. (thousand metric tons and per cent by volume)[a]

Commodity	Year				
	1957	1958	1959	1960	1961
Poultry	3.0	4.5	23.8	42.9	69.4
Other meat	31.0	25.5	31.2	28.1	27.6
Total meat	34.0	30.0	55.0	71.0	97.0
Poultry as a percentage of total U. S. meat exports to the E.E.C.	8.82	15.0	43.27	60.42	71.55

[a]Source: (47, 1).

expected pattern, i.e., that of a general decline in quantity exported by the United States to the Six. The tremendous increase in flow of poultry meats to the E.E.C. can be attributed to a large domestic demand for poultry meat in the E.E.C. following the general rise of per capita income. This demand has been met by United States producers who, because of the efficient methods of production employed, have been able to compete successfully in the E.E.C. market.*

United States exports of edible animals and animal products have maintained their competitiveness in the E.E.C. over

*The new E.E.C. tariff on poultry and its repurcussions on United States exports of poultry to the Common Market are discussed in section B of Part II.

the period from 1928 to the present in spite of a structural decline on the world market. This is the result of increased exports of poultry products in the late 1950's and early 1960's. Dairy products show a slight growth over the period, particularly in the early 1950's. This increased activity was the result of increased trade in dried milk products. However, production of dried milk products increased some 30 per cent from 1958 to 1960 with the greatest development coming in the Netherlands, France and Belgium. Production and exports of dried milk products relies heavily on government subsidies. These government policies have stimulated production within the Six and at the same time have provoked refined methods of protection in the importing countries. As a result, the decline in exports of milk products observed during the latter 1950's can be expected to continue into the future. There has been an increase in importance of non-specified animal products over the years. This is a catch-all classification and is very difficult to validly interpret as its contents are likely to vary a great deal over time as new products are introduced or as classifications of commodities are altered. The demand which appears to be developing in the Six for United States exports of edible animals and animal products consists of demand for speciality items not yet produced in the Common Market and for poultry products (at least until Community production catches up with the consumer demand for poultry products). The ability of the United States to remain competitive within this area

will be dependent upon the domestic production stimulated by the Common Agricultural Policy with respect to poultry and the specialty products.

2. Animals and animal products, inedible

United States exports of inedible animal products to the E.E.C. have not managed to maintain the share of total United States exports that they held in 1928. In the 34 years from 1928 to 1962 these exports have fallen from 0.6 per cent to 0.5 per cent of total United States exports. This has been the result of a lack of comparative growth in exports of leather, furs and manufactures, and non-specified animal products. Exports of hides and skins and animal and fish oil to the Common Market have increased in share of total United States exports over the time period as the United States became more competitive in the world market in these areas.

Hides, skins and furs have declined in importance in world trade accounting for 1.7 per cent of world trade in 1928 and only 0.5 per cent in 1960. The United States has become much more competitive in these areas increasing her share of world exports in hides, skins and furs from 11.4 per cent in 1928 to 19.5 per cent in 1960 (see Table 19). The per cent of total United States exports of hides, skins and furs going to the E.E.C. has fluctuated from a high of near 44 per cent in 1948 to a low of 6 per cent in 1933. The share of United States exports going to the Community remained relatively

constant during the 1950's, varying from 29 per cent to 32 per cent. This share has shown a tendency to decrease in 1961 and 1962, however, as United States exports of hides and skins have begun to taper off in the face of the increased livestock production within the E.E.C. The greater the production of livestock of the E.E.C., the less demand will exist for imports from third countries. This growth is demonstrated by the growth in intra-E.E.C. trade of hides and skins which has been developing over the past few years, as seen in Table 25. France, Belgium-Luxembourg and the Netherlands are the most important suppliers in the Market with West Germany being the major recipient. The largest part of imports entering the E.E.C. come from other countries such as Argentina, Australia and India. United States exports were at an all time high in the late 1950's as lower United States prices coupled with improved United States marketing techniques made United States exports much more attractive and competitive in the Common Market countries.

United States exports of leather to the Six have shown increased activity in the past few years as the share of United States exports of leather goods going to the E.E.C. rose from 8 per cent in 1952-54 to 40 per cent in 1962. This undoubtedly reflects the economic growth and higher standards of living present in the Community.

United States exports of inedible animal and fish oils to the Market have shown the greatest expansion over the 34

Table 24. United States exports of inedible animal products to the E.E.C. 1928 to 1962[a] (millions of dollars and per cent)

Year / Commodity		1928	1933	1938	1948	1952-54	1956-57	1959	1961	1962
Animal & Animal Prod. (inedible)		31.3	8.6	4.3	19.2	57.3	102.2	103.0	109.2	95.5
of which										
hides & skins		3.8	0.4	0.3	5.1	10.7	19.8	20.1	22.0	20.6
leather		7.6	3.1	1.2	2.6	1.6	2.2	6.6	21.8	13.7
leather manufactures		0.9	0.2	0.2	0.8	0.3	0.5	0.4	0.6	0.7
furs & man.		13.3	3.6	2.0	5.2	7.2	14.0	12.5	16.1	18.0
animal & fish oil		0.2	0.8	0.2	4.9	35.6	62.2	58.7	43.6	35.0
animals & animal prod. n.e.s.		5.5	0.6	0.5	0.6	1.8	3.1	4.7	5.1	6.6
Animal & Animal Prod.	(1)	0.61	0.51	0.14	0.15	0.38	0.52	0.59	0.53	0.45
(inedible)	(2)	1.45	1.10	0.46	0.50	1.63	2.13	2.26	1.94	1.70
	(3)	22.57	22.11	10.14	15.16	28.50	34.77	34.60	30.25	29.97
hides & skins	(1)	0.07	0.03	0.01	0.04	0.07	0.10	0.12	0.11	0.10
	(2)	0.18	0.05	0.03	0.13	0.31	0.41	0.44	0.39	0.37
	(3)	34.18	20.79	6.11	43.78	28.94	31.23	32.03	25.52	24.80
leather man.	(1)	0.15	0.18	0.04	0.02	0.01	0.01	0.04	0.11	0.06
	(2)	0.35	0.39	0.12	0.07	0.04	0.05	0.15	0.39	0.24
	(3)	13.63	22.37	9.60	12.87	7.72	10.04	24.91	47.03	40.38
leather man.	(1)	——	——	0.01	——	——	——	——	——	——
	(2)	0.04	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01
	(3)	5.11	5.25	2.54	2.21	1.44	1.85	1.51	3.17	3.54
furs & man.	(1)	0.26	0.21	0.06	0.04	0.05	0.07	0.07	0.08	0.08
	(2)	0.62	0.45	0.21	0.13	0.21	0.29	0.27	0.29	0.32
	(3)	33.88	23.30	14.18	16.84	23.81	34.99	31.46	35.07	37.36
animal & fish oil	(1)	——	0.05	——	0.04	0.23	0.32	0.34	0.21	0.17
	(2)	——	0.10	0.02	0.13	1.01	1.30	1.29	0.77	0.64
	(3)	2.60	26.51	30.53	26.09	44.21	46.61	46.93	30.76	32.22
animal & animal prod.	(1)	0.11	0.03	0.02	——	0.01	0.02	0.03	0.02	0.03
n.e.s.	(2)	0.25	0.07	0.05	0.02	0.05	0.06	0.10	0.09	0.12
	(3)	64.62	32.68	18.38	8.46	20.76	29.36	23.58	24.92	28.71

(1) Exports to the E.E.C. as a percentage of total U.S. exports.
(2) Exports to the E.E.C. as a percentage of total U.S. agricultural exports.
(3) Exports to the E.E.C. as a percentage of total U.S. exports of a given commodity group.

[a]Sources: (62, 64, 65 and 66).

Table 25. The origin of E.E.C. imports of hides and skins (million U. S. dollars c.i.f. and per cent)[a]

Source		Year					
		1952-54	1956-57	1958	1959	1960	1961
United States	(1)	8.58	20.31	20.40	17.21	17.83	23.11
	(2)	4.91	8.77	9.90	6.35	6.30	7.77
Intra-E.E.C.	(1)	14.04	26.86	26.73	43.45	49.95	55.99
	(2)	8.04	11.59	12.97	16.03	17.64	18.83
Other countries	(1)	152.06	184.52	158.92	210.32	215.33	218.21
	(2)	87.05	79.64	77.13	77.62	76.06	73.40

(1) Value of imports
(2) Per cent share of total E.E.C. imports

[a]Source: (1).

years studied, i.e., 1928 to 1962. This growth reached a peak in 1956-57 and has been declining ever since. This changing pattern of trade reflects the economic growth of the Common Market since the demand for fats and oils of this nature is primarily an industry oriented one. The primary uses for these fats and oils are in the manufacturing of soap and other industrial products. The growth of industry in the E.E.C., urged on by the movements towards economic integration, has created a significant demand for products of this nature. The decline in both total value of E.E.C. imports and share of total United States exports of animal and fish oils shipped to the E.E.C. can be attributed to growth in domestic production of livestock products within the Six. This increased production has led to increased intra-trade among the Six at the expense of exports from other third countries such as the United States.

3. Vegetables and vegetable products, edible

The pattern of United States exports of edible vegetable products from 1928 to the present is shown in Table 26. This group of agricultural commodities is one of the more important groups strengthening the competitive position of the United States in the world export market. The value of United States exports of vegetable products has risen from 122 million dollars in 1928 to 574.9 million dollars in 1962. There was a substantial rise during the 1950's as United States exports

Table 26. United States exports of edible vegetable products 1928 to 1962[a] (millions of dollars and per cent)

Year / Commodity		1928	1933	1938	1948	1952-54	1956-57	1959	1961	1962
Vegetables & Vegetable Prod. (edible)		122.0	34.2	86.1	1,051.1	282.4	382.9	410.0	488.3	574.9
of which										
grains & prep.		70.6	4.0	57.4	861.5	222.0	285.9	312.1	387.5	408.0
fodders & feeds		17.1	6.7	6.6	2.7	3.4	11.4	27.5	20.8	61.9
vegetables & prep.		0.7	0.5	0.3	4.8	8.3	8.8	13.5	13.3	24.6
fruits & prep.		30.4	20.5	20.3	54.8	22.8	58.5	44.4	56.8	66.7
nuts & prep.		0.3	1.2	0.3	51.2	3.4	6.3	2.4	1.4	3.0
vegetable oils, fat & wax		----	----	----	6.8	15.2	4.8	2.5	2.9	2.7
cocoa, tea, coffee & sub.		0.8	0.5	0.1	1.7	1.1	2.6	2.8	1.7	2.6
spices		----	----	----	0.1	0.1	0.1	0.1	0.2	0.2
sugar & related prod.		1.9	0.6	0.6	6.2	4.1	3.6	3.9	2.0	4.0
beverages		0.1	----	0.3	1.4	2.0	0.5	0.7	1.6	1.6
Vegetables & Vegetable Prod.	(1)	1.38	0.24	1.85	6.90	1.46	1.45	1.80	1.88	1.91
	(2)	3.26	0.51	6.08	22.46	6.32	5.96	6.86	6.87	7.27
	(3)	22.36	12.79	25.68	50.53	20.68	21.13	22.07	20.47	19.92
grains & prep.	(1)	0.33	0.40	0.21	0.02	0.02	0.06	0.16	0.10	0.29
	(2)	0.79	0.86	0.70	0.07	0.10	0.24	0.60	0.37	1.10
	(3)	55.35	68.36	55.35	18.55	14.65	19.02	33.66	25.83	44.01
fodders & feeds	(1)	----	0.03	0.01	0.04	0.05	0.04	0.08	0.06	0.12
	(2)	0.03	0.07	0.03	0.13	0.24	0.18	0.30	0.24	0.44
	(3)	3.14	7.12	1.92	3.11	8.13	6.70	9.31	10.87	17.16

[a]Sources: (62, 64, 65 and 66).

Table 26 (Continued)

Commodity	Year	1929	1933	1938	1948	1952-54	1956-57	1959	1961	1962
vegetables & prep.	(1)	0.59	1.23	0.66	0.44	0.15	0.30	0.26	0.28	0.31
	(2)	1.41	2.62	2.16	1.43	0.65	1.22	0.98	1.01	1.19
	(3)	23.81	30.36	21.15	54.50	15.04	24.40	18.50	20.88	23.37
fruits & prep.	(1)	----	0.07	0.01	0.41	0.02	0.03	0.01	0.01	0.01
	(2)	0.02	0.15	0.04	1.33	0.10	0.13	0.05	0.03	0.05
	(3)	21.67	59.55	12.94	54.50	27.50	31.46	16.18	12.21	19.41
nuts & prep.	(1)	----	----	----	0.05	0.10	0.02	0.01	0.01	0.01
	(2)	----	----	----	0.18	0.43	0.10	0.06	0.05	0.04
	(3)	0.51	2.34	1.49	28.22	32.36	4.01	2.42	3.49	1.80
vegetable oils, fat & wax	(1)	0.02	0.03	----	0.01	0.01	0.01	0.02	0.01	0.01
	(2)	0.04	0.07	0.02	0.04	0.03	0.05	0.06	0.03	0.05
	(3)	20.19	27.70	5.82	17.03	14.85	1.42	14.62	6.83	8.20
cocoa, tea, coffee & sub.	(1)	----	----	----	----	----	----	----	----	----
	(2)	----	----	----	----	----	----	----	----	----
	(3)	1.47	3.83	----	5.85	6.10	3.30	6.69	7.92	9.58
spices	(1)	0.04	0.04	0.02	0.05	0.03	0.02	0.02	0.01	0.02
	(2)	0.09	0.08	0.07	0.16	0.12	0.07	0.08	0.04	0.07
	(3)	9.46	11.82	8.55	21.99	15.43	12.24	16.54	10.81	20.80
sugar & related prod.	(1)	----	----	0.01	0.01	0.01	----	----	----	----
	(2)	----	----	0.04	0.04	0.06	0.01	0.02	0.03	0.03
	(3)	5.35	2.95	10.04	6.13	11.14	3.12	5.04	10.08	16.72
beverages	(1)	2.38	2.04	2.78	8.41	1.86	1.94	2.36	2.37	2.69
	(2)	5.64	4.36	9.12	27.40	8.04	7.98	9.01	8.66	10.24
	(3)	22.94	26.81	23.70	48.67	18.97	19.30	19.90	19.34	20.36

(1) Exports to the E.E.C. as a percentage of total U.S. exports.
(2) Exports to the E.E.C. as a percentage of total U.S. agricultural exports.
(3) Exports to the E.E.C. as a percentage of total U.S. exports of a given commodity group.

of edible vegetable products to the Common Market rose from 282.4 million dollars in 1952-54 to 514.9 million dollars in 1962. United States exports of edible vegetable products are concentrated in four commodity groups, i.e., grains and preparations, fodders and feeds, vegetables and vegetable preparations and fruits and preparations. The remaining commodities account for approximately 3 per cent of United States exports of vegetable products to the E.E.C. and will generally be ignored in studying the trade patterns between the United States and the E.E.C.

Cereals and preparations have lost importance in world trade since 1928 as previously discussed. The United States has emerged through this transition period increasing its competitiveness in cereals and preparations from 17.6 per cent in 1928 to 51.8 per cent in 1960. The share of total United States exports of cereals and preparations going to the E.E.C. has remained quite constant over the years as the E.E.C. absorbed approximately 1/5 of total United States exports of cereals and preparations over the years. Cereals and preparations consist of wheat and wheat products on one hand and the coarse feed grains on the other.

United States exports of feed grains have grown to the point where they are now the more important constituent of United States exports of grains and preparations to the Six. This has come about as the Community has become nearly

Table 27. Commodity composition of United States exports of cereals and preparations going to the E.E.C. (millions of dollars c.i.f.)[a]

Commodity	Year					
	1952-54	1956-57	1958	1959	1960	1961
Wheat and wheat flour	164.86	164.48	58.89	50.77	53.12	188.74
Feed grains	86.99	150.52	144.79	231.43	221.21	199.47
Total cereals	251.85	315.00	203.68	282.20	274.33	388.21

[a]Source: (1).

self-sufficient in wheat production and is therefore importing less wheat than had been imported previously. This trend, coupled with an increasing demand for feed grains brought about by the rapid growth in livestock production, explains the emergence of feed grains as the major cereals group exported by the United States to the E.E.C. The E.E.C. now accounts for 40 per cent of world imports of feed grains. The United States is the major supplying country of feed grains to the E.E.C. accounting for some 38 per cent of E.E.C. imports in 1960-61. The Netherlands is the chief recipient of feed grains in the Market with France being the only supplier among the Six member countries. Other major suppliers to the market in feed grains are Argentina, Australia and South Africa who supplied approximately 1/2 of E.E.C. imports of feed grains over the past decade. United States exports of feed grains to the E.E.C. declined slightly in 1961. This was the result of above average feed grain crops in the E.E.C. and a considerable portion of the wheat crop was diverted to feeding purposes away from human consumption due to moisture damage and overall poor quality. However, even with this decline in demand in Europe the United States still held on to the same share of the available market as she had maintained the previous year. United States shipments of feed grains rose considerably in 1962 reflecting Italian trade liberalization, increased demand by livestock feeders, less available wheat to convert to

Table 28. The origin of E.E.C. imports of feed grains (millions of U. S. dollars c.i.f. and per cent)[a]

Source		Year					
		1952-54	1956-57	1958	1959	1960	1961
United States	(1)	86.99	150.53	144.79	231.43	221.21	199.47
	(2)	21.18	26.76	32.47	44.71	38.03	38.42
Intra-E.E.C.	(1)	11.53	55.62	21.44	16.99	39.79	89.39
	(2)	1.87	10.99	4.81	3.28	6.84	17.22
Other countries	(1)	278.65	299.71	279.66	269.24	320.73	230.30
	(2)	76.95	59.25	62.72	52.01	55.13	44.36

(1) Value of imports
(2) Per cent share of total E.E.C. imports

[a]Source: (1).

feeding purposes and less competition from its other major competitors.

Community demand for wheat has decreased over the years as the E.E.C. has increased its degree of self-sufficiency to over 90 per cent of total domestic demand. The demand for wheat which does exist in the E.E.C. can be attributed mainly to a need for high quality wheat suitable for blending purposes. In the past, the United States has been a major supplier of both hard and soft wheats with the quantity exported to the member countries varying from year to year with the size of the crop within the E.E.C. However, the United States share has been declining the past decade, with the exception of 1961, when a poor crop in the E.E.C. caused a three-fold increase in United States exports of wheat to the E.E.C. over the previous year. The downward trend, however, was resumed in 1962 as wheat production was increased in the Community. France stands out as the important source of Community grown grain with West Germany and the Netherlands being the chief importers. One must keep in mind that Community demand will be a function of the weather conditions affecting the yearly crop and that when assessing a declining United States competitiveness characteristic to the United States position in the E.E.C., resulting from increased self-sufficiency within the Community, a normal growth is assumed. Increasing competitiveness is being felt from such countries as Canada, Argentina and the U.S.S.R. Canada has been the major source

Table 29. The origin of E.E.C. imports of wheat and wheat products (millions of U. S. dollars c.i.f. and per cent)[a]

Source		Year					
		1952-54	1956-57	1958	1959	1960	1961
United States	(1)	164.89	164.48	58.89	50.77	53.12	188.74
	(2)	33.57	33.27	18.66	15.66	17.33	35.62
Intra-E.E.C.	(1)	19.15	35.68	41.38	45.22	45.12	36.72
	(2)	3.90	7.22	13.11	13.95	14.72	6.93
Other countries	(1)	307.14	294.25	215.28	228.18	208.26	304.36
	(2)	62.53	59.51	68.23	70.39	67.95	57.45

(1) Value of imports
(2) Per cent share of total E.E.C. imports

[a]Source: (1).

of hard wheat exports to the E.E.C. the past few years. The competitive position of the United States seems to be on the decline in wheat and wheat products while appearing on the other hand to be increasing in the expanding E.E.C. feed grain market.

The United States has increased her exports of feeding stuff to the Six roughly three times over the 34 year period from 1928 to 1962. The United States has, however, suffered a loss in competitiveness in the world market. The United States share of the world market has dropped from 43 per cent in 1928 to 34.5 per cent in 1960. During this same time period the per cent share of these exports going to the Common Market has also decreased from 55.4 per cent to 30.6 per cent, as seen in Table 19. The competitiveness of the United States in the E.E.C. market, though following a fluctuating pattern over the years, appears to be relatively encouraging. The major portion of this trade is concerned with oilseed meal and various prepared feeds. The demand for these products follows a rise and fall course depending on prices and domestic feed supplies.

Intra-trade among the Six in feeding stuff, as a per cent of total E.E.C. imports, has fallen from 29.3 per cent to 24.3 per cent in the past decade despite a 400,000 metric ton increase in volume traded. This increased demand for feeding stuff has been the result of increased per capita income and resulting increased demand for meat and other livestock

Table 30. The origin of E.E.C.[a] imports of feeding stuff (millions of U. S. dollars c.i.f. and per cent)

Source		Year					
		1952-54	1956-57	1958	1959	1960	1961
United States	(1)	4.18	14.7	8.92	22.78	30.49	24.11
	(2)	3.74	8.64	4.52	8.01	10.91	8.46
Intra-E.E.C.	(1)	28.95	46.60	41.12	61.36	60.29	69.40
	(2)	25.76	27.40	20.82	21.57	21.57	24.34
Other countries	(1)	79.25	108.78	147.47	200.31	188.71	191.62
	(2)	70.50	63.96	74.66	70.42	67.52	67.20

(1) Value of imports
(2) Per cent share of total E.E.C. imports

[a] Source: (1).

products. Generally speaking, the competitive position of the United States in the E.E.C. feeding stuff market appears to be one of fairly good strength and consistency.

Fruits, vegetables and preparations have suffered a loss in share of the world export market since 1928. The United States has forfeited some competitiveness during this period accounting for only 21.7 per cent of world exports in 1960 compared to 27.4 per cent in 1928. The United States has also lost some of its competitive position in the Common Market as only 15.5 per cent of the United States exports of fruits and vegetables went to the Six in 1960 in comparison to almost 21 per cent in 1928.

Exports of fruits constitute 2/3 of United States exports of fruits, vegetables and nuts to the E.E.C. These exports consist of prunes, oranges, orange juice and canned diciduous fruits. The E.E.C. accounted for 23 per cent of United States exports of fruits in 1962, which is approximately the same share absorbed by the Community in 1928. Exports of fruit to the Community have shown significant fluctuations from year to year largely as the result of fluctuations in crop yields in both the E.E.C. and in the United States.

Table 31 shows the changing pattern of import trade in the E.E.C. of fruits and nuts during the 1950's. There appears to be a tendency towards increase in intra-Community trade in these commodities. At present this expansion appears to be taking place at the expense of third country producers other

Table 31. The origin of E.E.C. imports of fruits and nuts (millions of U. S. dollars c.i.f. and per cent)[a]

Source		Year					
		1952-54	1956-57	1958	1959	1960	1961
United States	(1)	27.91	68.22	59.02	40.21	48.48	59.0
	(2)	6.42	9.43	7.30	5.19	5.73	6.18
Intra-E.E.C.	(1)	98.80	174.97	165.60	210.93	225.92	268.42
	(2)	22.71	24.19	20.48	27.22	26.72	28.14
Other countries	(1)	308.29	480.24	583.89	523.71	571.06	626.61
	(2)	70.87	66.38	72.22	67.59	67.55	65.68

(1) Value of imports
(2) Per cent share of total E.E.C. imports

[a]Source: (1).

than the United States, whose share of the E.E.C. market has remained relatively stable over the years. Nuts play a relatively unimportant role in this trade as the value of United States exports of nuts to the E.E.C. has been less than 3 million dollars the past several years. The largest part of E.E.C. imports of fruits and nuts comes from countries such as South Africa, Spain, Argentina, Turkey and Greece. With the admittance of Greece as an associate member the pattern of trade in fruits could well change as increased shipments of peaches and table grapes is expected to flow from Greece to the Six.

United States exports of vegetable products to the E.E.C. have increased in importance since 1928. Most of this increase has come during the 1950's with exports of vegetable products tripling in value from 1952-54 to 1962. The per cent of United States exports of vegetables going to the E.E.C. has doubled during that time period as exports of the E.E.C. accounted for 17.16 per cent of total United States exports of vegetables and preparations in 1960; a 9 per cent increase in the share of total United States exports of vegetables going to the Community since 1952-54. A more valid comparison might lie in examining the trend in trade between 1952-54 and the average of 1961-62. This would remove some of the tendency to overestimate the changes in the pattern of trade resulting from the two-fold increase in United States exports to the E.E.C. in 1962 following a poor Community vegetable crop. If

this average is used, the per cent of total United States exports of vegetables going to the E.E.C. is 14.20 or an increase of 6 per cent since 1952-54. At best one can conclude that the United States is maintaining its competitive position in the E.E.C. market for fruits, vegetables and nuts. There may be a slight tendency towards improvement in the United States share of this market as indicated by the increase in United States exports of vegetables and vegetable products to the Market in 1961-62. The decline which was present in 1959-60 has been more than compensated for as the per cent of United States exports of this commodity group increased almost 6 per cent in the two years following 1960. This trend would make one optimistic about the present competitive position of the United States in the E.E.C. vegetable and vegetable products market.

4. Vegetable and vegetable products, inedible

United States exports to the E.E.C. of this commodity group have doubled in importance to total United States trade since 1928. This increase has come about as the result of relative increases in United States exports of tobacco, vegetable oil, fat and wax, oilseeds, and rubber and manufactures. These commodities account for the major trade in this area.

United States exports of rubber consist almost entirely of manufactured articles. Since this study is directly

Table 32. United States exports of inedible vegetable products to the E.E.C. 1928 to 1962[a] (millions of dollars and per cent)

Year / Commodity		1928	1933	1938	1948	1952-54	1956-57	1959	1961	1962
Vegetables & Vegetable Prod. (inedible)		36.6	16.7	16.7	98.8	167.3	342.1	356.7	385.4	418.1
of which										
rubber & man.		9.7	2.6	2.8	15.7	12.1	54.0	74.8	78.7	75.9
naval stores, gums & resins		8.1	3.1	1.7	5.4	8.9	14.4	14.9	18.6	16.4
drugs, leaves, herbs & roots		0.4	0.1	0.2	0.1	0.3	0.3	0.3	0.5	0.4
oilseeds		——	0.1	0.2	16.7	28.7	94.5	119.2	133.9	174.0
vegetable oils, fat & wax		0.4	0.7	0.4	16.6	26.9	67.1	43.0	29.4	15.2
seeds (except oilseeds)		0.7	0.5	0.5	5.1	3.9	6.8	3.7	3.9	5.1
nursery & floral stock		——	——	0.2	——	0.1	0.2	0.3	0.4	0.6
tobacco & man.		16.4	9.2	10.5	35.3	78.8	90.3	48.3	117.3	127.0
vegetable prod. n.e.s.		0.8	0.3	0.2	3.9	1.7	2.4	2.2	1.6	3.4
Vegetables & Vegetable Prod.	(1)	0.71	1.00	0.54	0.79	1.10	1.73	2.05	1.88	1.96
	(2)	1.68	2.13	1.77	2.58	4.76	7.13	7.84	6.82	7.45
	(3)	12.08	12.32	7.36	17.59	20.57	30.53	27.86	20.69	28.75
rubber & man.	(1)	0.19	0.16	0.09	0.13	0.08	0.27	0.43	0.38	0.36
	(2)	0.44	0.34	0.29	0.41	0.34	1.13	1.64	1.40	1.35
	(3)	13.98	14.83	10.18	11.87	11.30	21.15	22.90	23.82	22.63
naval stores, gums & resins	(1)	0.16	0.19	0.06	0.04	0.06	0.07	0.09	0.09	0.08
	(2)	0.37	0.40	0.18	0.14	0.25	0.30	0.33	0.33	0.29
	(3)	30.62	21.27	14.11	17.55	29.67	35.75	33.23	35.03	33.95

[a]Sources: (62, 64, 65 and 66).

Table 32 (Continued)

Commodity \ Year		1928	1933	1938	1948	1952-54	1956-57	1959	1961	1962
drugs, leaves, herbs & roots	(1)	----	----	----	----	----	----	----	----	----
	(2)	0.02	----	0.02	----	0.01	----	----	0.01	----
	(3)	10.95	6.60	8.80	4.99	11.52	8.52	9.62	13.53	9.90
oilseeds	(1)	----	----	----	0.13	0.19	0.48	0.69	0.65	0.81
	(2)	----	0.01	0.02	0.43	0.82	1.97	2.62	2.38	3.10
	(3)	4.38	35.61	9.70	50.82	23.56	41.27	37.65	36.54	40.62
vegetable oils, fat & wax	(1)	----	0.04	0.01	0.13	0.18	0.34	0.25	0.14	0.07
	(2)	0.02	0.09	0.04	0.43	0.77	1.40	0.95	0.52	0.27
	(3)	6.73	17.62	11.52	44.47	53.84	62.17	40.14	35.27	15.54
seeds (except oilseeds)	(1)	----	0.03	0.02	0.04	0.03	0.03	0.02	0.02	0.02
	(2)	0.03	0.06	0.06	0.13	0.11	0.14	0.08	0.07	0.09
	(3)	24.55	29.85	26.61	39.02	36.21	39.01	23.04	21.58	26.78
nursery & floral stock	(1)	----	----	----	----	----	----	----	----	----
	(2)	----	----	0.02	----	----	----	----	----	0.01
	(3)	3.51	----	6.21	4.46	2.27	4.65	5.36	6.17	11.27
tobacco & man.	(1)	0.32	0.55	0.34	0.28	0.52	0.46	0.57	0.57	0.59
	(2)	0.76	1.17	1.11	0.92	2.24	1.88	2.16	2.08	2.26
	(3)	9.14	10.25	6.18	12.30	22.02	21.70	22.32	23.50	25.87
vegetable prod. n.e.s.	(1)	----	0.02	0.01	0.03	0.01	0.01	0.01	0.01	0.02
	(2)	0.04	0.04	0.03	0.10	0.05	0.05	0.05	0.03	0.06
	(3)	7.09	6.46	3.95	16.38	12.33	16.19	12.54	11.09	17.99

(1) Exports to the E.E.C. as a percentage of total U.S. exports.
(2) Exports to the E.E.C. as a percentage of total U.S. agricultural exports.
(3) Exports to the E.E.C. as a percentage of total U.S. exports of a given commodity group.

concerned with agricultural originating commodities, the study of changing trends in rubber goods will be foregone at this time.

Tobacco and manufactures constitute another important United States export in this commodity group. Exports of tobacco have risen from 16.4 million dollars in 1928 to 127 million dollars in 1962. Tobacco suffered a structural decline on the world market of approximately 0.10 per cent from 1928 to 1960. During this same period the United States increased her share of the world market of tobacco and manufactures from 45.6 per cent to 49.6 per cent. The competitive position of the United States in the E.E.C. tobacco market appears to be deteriorating over the period from 1952-54 to 1961. United States shipments of unmanufactured tobacco to the E.E.C. have been maintained absolutely on a volume basis, but not relatively, since U. S. tobacco exports have not shared proportionately in the growth of E.E.C. imports of unmanufactured tobacco. The United States share of E.E.C. imports of unmanufactured tobacco has fallen from 34 per cent to 27 per cent from 1952-54 to 1961 when calculated on a volume basis. This decline in the United States share has come about as the volume of imports from other third country suppliers such as Greece, Rhodesia-Nyasaland, Turkey and Bulgaria have increased along with an increase in intra-trade in tobacco among the Six. In 1960-61 this intra-Community trade in tobacco averaged 450 per cent above the 1952-54 level.

Table 33. The origin of E.E.C. imports of unmanufactured tobacco (millions of dollars c.i.f., 1000 metric tons and per cent)[a]

Source		Year					
		1952-54	1956-57	1958	1959	1960	1961
United States	(1)	62.14	67.02	73.40	68.40	83.65	86.41
	(2)	51.0	52.5	51.0	46.0	58.0	58.0
	(3)	37.54	32.48	34.06	33.37	36.69	35.11
Intra-E.E.C.	(1)	3.61	6.10	8.88	10.88	20.52	35.41
	(2)	3.0	6.00	8.0	9.0	14.0	22.0
	(3)	2.18	2.96	4.12	5.31	9.00	14.39
Other countries	(1)	103.10	133.22	133.23	125.67	123.85	124.33
	(2)	95.0	110.5	118.0	124.0	126.0	134.0
	(3)	60.28	64.56	61.82	61.32	54.04	50.50

(1) Value of imports
(2) Volume of imports
(3) Per cent share of total E.E.C. imports based on value

[a]Source: (1).

When value figures are examined, this deterioration of United States competitiveness is not evident. United States tobacco prices have been rising during the period from 1952-54 to 1961 while the prices of other third country suppliers have been decreasing. As a result, tobacco from these other sources is being substituted for the higher priced United States tobacco. The increase in United States price compensates for the decline in the volumetric share of the E.E.C. tobacco market and as a result the value figures do not give an accurate analysis of the situation.

The E.E.C. share of total United States exports of unmanufactured tobacco has shown a continual increase during the 1950's as this share increased from 22 per cent in 1952-54 to nearly 26 per cent in 1962. Tobacco became relatively more important to total United States exports as well as total agricultural exports during this period with tobacco exports to the E.E.C. accounting for 0.6 per cent of total exports and 2.3 per cent of total agricultural exports. The United States is still the principal supplier of tobacco to the E.E.C., but exports of Rhodesian flue-cured tobacco are becoming increasingly important in the Community tobacco market and are expected to become highly competitive with United States exports.

Fats, oils and oil seeds constitute an important part of United States exports of vegetable products to the E.E.C. Fats and oils, usually studied as one group, consist of both animal and vegetable products of both edible and inedible

nature. It seems expedient to discuss United States exports of fats and oils to the E.E.C. as one group, distinguishing the trends which seem to be arising within the pattern of trade.

The share of fats and oils in total world exports has shown a slight decline from 1928 to 1960, not unlike most agricultural commodities. The United States position, however, has been strengthened as her share of the world exports in fats and oils has risen phenomenally from 26.63 per cent to 50.26 per cent.

Table 34 summarizes the United States-E.E.C. trade pattern in fats and oils from 1928 to 1962. Fats and oils can be divided into four general groups, i.e., animal originating fats and oils of an edible nature, inedible animal and fish oils, edible and inedible vegetable fats, oils and wax, and oilseeds. Edible animal fats and oils constituted the majority of United States exports of fats and oils to the E.E.C. in 1928. Exports of this group have, however, declined in value through the years to the place where it now is almost insignificant. This decline is especially noticeable since 1948. Exports of the inedible animal fats and oils have developed in a considerably different pattern over the years. United States exports to the E.E.C. increased over the years, reaching a peak in 1956-57 of 62.2 million dollars. Since then, however, there has been a definite decline in United States exports to the Community of inedible fats and oils following

Table 34. United States exports of fats and oils to the E.E.C. 1928 to 1962[a] (millions of dollars and per cent)

Commodity / Year		1928	1933	1938	1948	1952-54	1956-57	1959	1961	1962
Animal oils & fats (edible)		41.9	12.7	0.6	28.8	14.0	6.8	5.1	3.4	2.2
Animal & fish oils (inedible)		0.2	0.8	0.2	4.9	35.6	62.2	58.7	43.6	35.0
Vegetable oils, fat & wax (edible)		----	----	----	6.8	15.2	4.8	2.5	2.9	2.7
Vegetable oils, fat & wax (inedible)		0.4	0.7	0.4	16.6	26.9	67.1	43.0	29.4	15.2
Oilseeds		----	0.1	0.2	16.7	28.7	94.5	119.2	133.9	174.0
Animal oils & fats (edible)										
	(1)	0.82	0.76	0.02	0.23	0.09	0.03	0.03	0.01	0.01
	(2)	1.89	1.62	0.06	0.75	0.40	0.14	0.11	0.06	0.04
	(3)	37.27	33.88	2.93	40.04	17.52	8.44	8.15	7.01	5.08
Animal & fish oils (inedible)	(1)	----	0.05	----	0.04	0.23	0.32	0.34	0.21	0.17
	(2)	----	0.10	0.02	0.13	1.01	1.30	1.29	0.77	0.64
	(3)	2.60	26.51	30.53	26.09	44.21	46.61	46.93	30.76	32.22
Vegetable oils, fat & wax (edible)	(1)	----	----	----	0.05	0.10	0.02	0.01	0.01	0.01
	(2)	----	----	----	0.18	0.43	0.10	0.06	0.05	0.04
	(3)	0.51	2.34	1.49	28.22	32.36	4.01	2.42	3.49	1.80
Vegetable oils, fat & wax (inedible)	(1)	----	0.04	0.01	0.13	0.18	0.34	0.25	0.14	0.07
	(2)	0.02	0.09	0.04	0.43	0.77	1.40	0.95	0.52	0.27
	(3)	6.73	17.62	11.52	44.47	53.84	62.17	40.14	35.27	15.54
Oilseeds	(1)	----	----	----	0.13	0.19	0.48	0.69	0.65	0.81
	(2)	----	0.01	0.02	0.43	0.82	1.97	2.62	2.38	3.10
	(3)	4.38	35.61	9.70	50.82	23.56	41.27	37.65	36.54	40.62

(1) Exports to the E.E.C. as a percentage of total U.S. exports.
(2) Exports to the E.E.C. as a percentage of total U.S. agricultural exports.
(3) Exports to the E.E.C. as a percentage of total U.S. exports of a given commodity group.

[a]Sources: 62, 64, 65 and 66).

a trend similar to their edible counterpart. The E.E.C. is still an important market for the United States in this area absorbing 1/3 of United States exports of inedible animal and fish oil in 1962 (after declining from a high of 47 per cent in 1956-59). The decline of the E.E.C. as a market for both edible and inedible fats and oils can be expected to continue in the light of increased livestock production within the E.E.C.

United States exports of both classifications of vegetable fats, oils and waxes appear to be following a similar trend. United States exports of vegetable fats, oils and waxes to the E.E.C. were quite insignificant in 1928. United States exports to the E.E.C. reached a peak in the early to middle 1950's and have been declining ever since in response to increased productivity within the Community the past few years coupled with increased competition from foreign sources.

The United States share of the E.E.C. fats and oils market was greatest in 1956-57 as 28 per cent of E.E.C. imports of fats and oils originated in the United States. This share has been declining the past four years as exports from countries such as the Belgian Congo, Senegal, Mali and Niger have increased their share at the expense of suppliers in the United States. These countries ship primarily peanut, palm and palm-kernel oils while the United States, still the largest single supplier of fats and oils to the Six, exports primarily soybean oil, cottonseed oil and tallow.

Table 35. The origin of E.E.C. imports of fats and oils (millions of U. S. dollars c.i.f. and per cent)[a]

Source		Year					
		1952-54	1956-57	1958	1959	1960	1961
United States	(1)	69.50	137.10	84.38	106.40	107.98	76.76
	(2)	18.34	27.83	22.11	25.60	21.83	16.86
Intra-E.E.C.	(1)	52.08	56.64	39.08	45.73	56.95	55.30
	(2)	13.74	11.50	10.26	11.00	11.51	12.15
Other countries	(1)	257.33	298.83	257.62	263.50	329.73	323.23
	(2)	67.92	60.67	67.60	63.40	66.66	70.99

(1) Value of imports
(2) Per cent share of total E.E.C. imports

[a]Source: (1).

The E.E.C. has emerged as the principal United States market for oilseeds over the time period from 1928 to 1962. The United States share of the E.E.C. market for oilseeds has risen from 10.69 per cent in 1952-54 to 29.31 per cent in 1961. This increase in the United States share has come about at the expense of other third country producers as the amount of intra-trade in oilseeds has remained relatively constant showing only a very slight decline in the 1950's. The third countries in competition with the United States for the E.E.C. market in oilseeds are Canada, Nigeria, the Phillipines, Senegal, Mali, and Niger who send peanuts, palm kernels, soybeans, flaxseed and rapeseed to the Six. United States exports consist mainly of soybeans and flaxseed which face the severest competition from Canada, whose exports of flaxseed and rapeseed already occupy a strong position in the E.E.C. fats and oils market.

The growth of United States-E.E.C. trade in fats and oils can be attributed to the phenomenal growth of United States exports of oilseeds to the Community. Soybeans have emerged as the major United States oilseed export to the Six and will probably occupy an even stronger position in the future. The trend towards increased United States-E.E.C. trade in fats and oils can be expected to continue as a growing mixed feed industry within the Community is providing a basis for additional expansion.

Table 36. The origin of E.E.C. imports of oilseeds, oil nuts and oil kernels (millions of dollars c.i.f. and per cent)[a]

Source		Year					
		1952-54	1956-57	1958	1959	1960	1961
United States	(1)	37.05	106.41	88.57	125.58	149.89	161.09
	(2)	10.67	21.70	18.65	25.02	26.90	29.31
Intra-E.E.C.	(1)	5.34	5.02	5.36	3.78	4.50	6.01
	(2)	1.55	1.02	1.13	0.75	0.81	1.09
Other countries	(1)	304.71	379.00	381.01	372.61	402.83	382.61
	(2)	87.78	77.28	80.22	74.23	72.29	69.60

(1) Value of imports
(2) Per cent share of total E.E.C. imports

[a]Source: (1).

5. Natural fibers

Natural fibers have suffered a significant loss of share in world trade in the 32 years since 1928. Textile fibers was one of the most important items of international trade accounting for 10.63 per cent of world trade in 1928. World exports in the natural fibers have literally stagnated in the years following 1928 such that natural fibers only accounted for 2.49 per cent of world trade in 1960. The United States share of world trade has remained relatively constant over this time period accounting for approximately 1/3 of world exports in both 1928 and 1960. The competitiveness of the United States in the world market, as well as the E.E.C. market is dependent on the price differentials between United States exports of natural fibers and those of other countries. This accounts for the year to year fluctuations of United States exports to the E.E.C. Cotton is the major natural fiber exported to the E.E.C. and so further analysis of United States-E.E.C. trade patterns in natural fibers will be centered in these areas.

The decline in importance of world trade in cotton has been discussed previously. The E.E.C. as a whole has emerged over the years as the world's largest market for cotton and the Community is also the world's fourth largest consumer of cotton following the United States, Communist China and the U.S.S.R. The Community imports over 1/2 of its cotton imports from such countries as Mexico, Brazil, Egypt and the U.S.S.R.

Table 37. United States exports of textile fibers and unmanufactured wood 1928 to 1962[a] (Millions of dollars and percentages)

Year / Commodity		1928	1933	1938	1948	1952-54	1956-57	1959	1961	1962
Cotton (unman.)		427.9	168.9	61.1	225.0	265.9	294.2	108.3	247.9	111.6
Cotton (semiman.)		2.5	1.3	4.3	6.6	15.1	18.2	13.9	16.2	18.6
Wool (unman.)		0.1	———	———	0.1	0.6	4.1	8.1	3.9	4.0
Wool (semiman.)		0.5	0.1	0.1	3.4	7.2	13.1	9.4	6.5	6.1
Wood (unman.)		1.0	0.4	1.0	0.4	2.4	2.4	3.6	7.3	11.1
Cotton (unman.)	(1)	8.35	10.08	1.98	1.80	1.74	1.49	0.62	1.20	0.52
	(2)	19.78	21.54	6.48	5.87	7.57	6.13	2.38	4.40	1.99
	(3)	46.51	42.74	27.25	44.04	36.55	32.92	23.96	28.03	20.77
Cotton (semiman.)	(1)	0.04	0.08	0.14	0.05	0.10	0.09	0.08	0.08	0.09
	(2)	0.12	0.17	0.46	0.17	0.43	0.38	0.31	0.29	0.33
	(3)	10.51	17.88	37.12	15.17	27.09	31.57	27.31	33.55	34.46
Wool (unman.)	(1)	———	———	———	———	———	0.02	0.05	0.02	0.02
	(2)	———	———	———	———	0.02	0.09	0.18	0.07	0.07
	(3)	37.94	1.75	11.47	18.32	26.66	28.58	37.34	25.49	35.92
Wool (semiman.)	(1)	———	0.01	———	0.03	0.05	0.07	0.05	0.03	0.03
	(2)	0.02	0.01	0.02	0.09	0.21	0.27	0.21	0.11	0.11
	(3)	28.15	35.58	20.55	31.54	36.17	45.46	40.93	29.83	30.09
Wood (unman.)	(1)	0.02	0.02	0.03	———	0.02	0.01	0.02	0.04	0.05
	(2)	0.05	0.05	0.10	0.01	0.07	0.05	0.08	0.13	0.20
	(3)	6.62	12.10	21.44	6.18	19.95	11.78	14.76	14.24	21.31

(1) Exports to the E.E.C. as a percentage of total U.S. exports.
(2) Exports to the E.E.C. as a percentage of total U.S. agricultural exports.
(3) Exports to the E.E.C. as a percentage of total U.S. exports of a given commodity.

[a]Sources: (62, 64, 65 and 66).

Table 38. The origin of E.E.C. imports of cotton (million dollars c.i.f. and per cent)[a]

Source		Year					
		1952-54	1956-57	1958	1959	1960	1961
United States	(1)	319.66	301.17	264.42	106.91	335.16	296.63
	(2)	38.68	38.04	40.10	19.44	44.29	41.47
Intra-E.E.C.	(1)	14.15	14.80	11.10	16.05	15.93	18.47
	(2)	1.71	1.87	1.68	2.92	2.11	2.58
Other countries	(1)	492.58	475.75	383.94	426.90	405.62	400.22
	(2)	59.61	60.09	58.22	77.64	53.60	55.95

(1) Value of imports
(2) Per cent share of total E.E.C. imports

[a] Source: (1).

Southern Italy is the only source of cotton production in the E.E.C. Italian cotton accounts for around 1 per cent of total cotton consumption in the Community. Intra-trade in cotton has remained relatively constant with the various third country's shares in the E.E.C. cotton market being dependent upon the price differentials between the various country prices. This is demonstrated by the changing share of the United States in the cotton market which fluctuates at the expense or gain of other third country producers. United States exports of cotton to the E.E.C. have been on a declining trend with respect to the growth taking place in the value of exports as a whole. The value of United States exports of cotton to the E.E.C. have at best remained constant and a decline is seemingly taking place in total value of cotton exported to the E.E.C. The United States is managing to maintain competitiveness in the world cotton market and in the cotton market of the E.E.C. However, the great structural decline of cotton is resulting in a general decrease in value of cotton exports by the United States and other major world suppliers.

6. Wood, unmanufactured

A brief word should be mentioned about the trade of forestry products in these trading patterns. Forestry products is one of the very few agricultural commodities which has maintained its share in world trade over the 32 years following 1928. This relative increase in trade of forestry products is resulting primarily

from industrial demand of wood pulp, for the manufacturing of paper, in the developed economies of the world. The United States is a major world supplier of these forest products and the E.E.C. is emerging as one of the primary markets for these forest products. The E.E.C. has increased its share of United States exports of forest products from 12.27 per cent to 22.48 per cent from 1952-54 to 1962. The United States has increased its share of world exports from 7.33 per cent in 1956-57 to 10.67 per cent in 1960. Forest products have played a rather unimportant part in United States exports in the past, but with increased international demand for forest products, and in particular wood pulp, forest products could become an important commodity in United States trade.

7. Summary

When one views the United States-E.E.C. trade pattern in agricultural commodities over the years following 1928, the conclusion is reached that there has been a very slight deterioration in United States competitiveness in the Common Market countries. The United States relative position during the 1950's and early 1960's appears to be fairly stable with the year-to-year fluctuations being the result of weather influences on crop production and the price differentials existing between United States prices and prices of her world competitors. The influence of government programs, resulting

Table 39. The origin of E.E.C. imports of agricultural commodities (million dollars c.i.f. and per cent)[a]

Source		Year					
		1952-54	1956-57	1958	1959	1960	1961
United States	(1)	817.7	1100.5	857.0	852.0	1120.0	1231.0
	(2)	13.54	14.29	12.38	11.47	13.09	14.73
Intra-E.E.C.	(1)	810.7	1208.0	1087.0	1360.0	1559.0	1716.0
	(2)	13.42	15.67	15.71	18.31	18.22	20.53
Other countries	(1)	4414.0	5398.5	4976.0	5215.0	5879.0	5412.0
	(2)	73.04	70.04	71.91	70.22	68.69	64.74

(1) Value of imports
(2) Per cent share of total E.E.C. imports

[a]Source: (1).

in higher price levels within the United States, have not aided the competitiveness of the United States in agricultural commodities on the world market. In the case of certain commodities, competitiveness on the world market has been achieved only as a result of various government disposal programs. These programs, though having little effect on United States exports to the E.E.C. have assisted the United States in maintaining its leadership in world trade of agricultural commodities. The impact of European economic integration upon United States-E.E.C. trade patterns has seemed to have caused little deterioration in the value of United States exports of agricultural commodities flowing to the E.E.C. The decline in importance of some commodities over the years has been compensated by growth in others. The United States has maintained her share in the Common Market at the expense of other third countries. The deterioration of the third country non-members' share of the E.E.C. agricultural market has come about as intra-Community trade of agricultural commodities has risen from 13 1/2 per cent to 20 1/2 per cent during the past decade. The future United States-E.E.C. pattern of trade in agricultural commodities will be dependent upon the institutional and economic changes which will occur within the Six as they seek to integrate their economies over the next 10 years. The

influence of the Common Agricultural Policy on the economic development of the Community and the resulting impact of the future net import position of the E.E.C. in agricultural commodities is discussed in Part III.

III. THE IMPACT OF EUROPEAN ECONOMIC INTEGRATION ON THE FUTURE UNITED STATES-E.E.C. PATTERN OF TRADE IN AGRICULTURAL COMMODITIES

The past and present pattern of trade in agricultural commodities discussed in Part II provides a basis for the discussion of the future pattern of trade in agricultural commodities between the United States and the E.E.C. The purpose of Part III will be to present and assess the impact of integration and particularly the Common Agricultural Policy adopted by the E.E.C. in January, 1962, with regard to the production of and the demand for agricultural commodities along with the resulting implications of these trends upon the future net trade position of the E.E.C. in agricultural commodities.

A. The Common Agricultural Policy

The body of the Rome Treaty, title II is devoted to the agricultural sector and contains some 10 separate articles. The treaty establishes the following objectives of agricultural policy:

(a) To increase agricultural productivity by developing technical progress and by insuring the rational development of agricultural production and the optimum utilization of the factors of production, particularly labor;

(b) To insure thereby a fair standard of living for the

agricultural population, particularly by the increasing of the individual earnings of persons engaged in agriculture;

(c) To stabilize markets;

(d) To guarantee regular supplies; and

(e) To insure reasonable prices in supplies to consumers (14, article 30, no. 1.).

The article further states that in putting the policy into practice, notice must be paid to:

(a) The particular character of agricultural activities, arising from the social structure of agriculture and from structural and natural disparities between the various agricultural regions;

(b) The need to make the appropriate adjustments gradually; and

(c) The fact that in member states agriculture constitutes a sector which is closely linked with the economy as a whole (14, article 39, no. 2).

Agriculture has always maintained a position of importance to the countries of the Common Market. This precedent was not broken by the framers of the Rome Treaty as they made the historical move towards economic integration among the Six. Agriculture plays an important part in the economic life of France, Italy and the Netherlands, all of whom are major exporters of agricultural products. Unification of the agricultural sectors of six different countries offered serious

problems, particularly with surpluses in several agricultural commodities beginning to show up in France. It presented perhaps the biggest stumbling block to European unification and very little was done until January of 1962 when the Common Agricultural Policy was agreed upon by the Council of Ministers.*

There was a definite economic need for such an economic program within the Six. Food costs have an important bearing upon the real industrial wage rate. Agricultural raw materials prices play a big role in determining production costs of many industries. The presence of divergent prices on the markets of the various countries would not only give a comparative advantage to low price third countries outside the union, but would also lead to serious adjustment problems within the agricultural sectors of the separate countries. Thus a common agricultural program needed to be included if economic integration was to take place with any amount of success.

The Common Agricultural Policy, which was the result of an evaluation of the agricultural problem in the E.E.C., has been referred to as the first detailed code on agriculture ever to have been adopted within Europe, even at the national level. It establishes, in general, the beginning of agricultural integration among the Six and aims towards attaining two of the objectives established by the original Rome Treaty.

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*This proposal was known as the Mansholt Plan and with minor modifications became the basis for the Common Agricultural Policy agreed upon by the Ministers.

These two all-important objectives are the insuring of a fair income for the agricultural sectors and the stabilization of the markets.

> The agreement treats in detail the marketing regulations for grains (except rice), poultry, eggs, pork, fruits and vegetables, and wine. In addition, there are some general regulations concerning processed products of an agricultural origin, rules of competition for intra-E.E.C. trade, financial arrangements for the operation of the agricultural policy measure, and principles for future regulations for dairy products, beef and sugar (29, p. 114).

The regulations differ substantially from commodity to commodity, but there are certain general features common to them all. These common features basically call for the replacement of all former tariff restrictions with a variable levy system. This system calls for the establishment of a target price for each commodity which is felt to be a fair return to the efficient family farm producer. Approximately ten per cent below this price an intervention price is established at which a community authority will purchase the commodity from any community producer. This subsidy program is financed through the European Agricultural Guidance and Guarantee Fund created from contributions made by the member states. This fund will also be used for structural improvements. Finally, all restrictions on imports will be replaced by variable levies. In intra-community trade these levies are to be reduced over time such that by the end of the transitory period in 1970 there will be no barriers to trade within the integrated Six, and a one price system will emerge. As far as third non-

member countries are concerned the levies will be calculated in such a way as to offset the difference between the lowest cost world producer and the Community target price after adjustment for transportation costs. This levy will be the same to all third countries and is used to insure the stability of income to the agricultural sector. These levies will not necessarily be reduced over time, in that they are completely dependent upon the amount of divergence between Community and world prices. The system will apparently work in such a way that demand for agricultural commodities in any one country will be met first of all by domestic production, secondly by production in the remaining member countries and finally, only if domestic sources within the E.E.C. are insufficient, will third country non-members supplies be purchased. Subsidies will also be paid within the E.E.C. in such a manner as to equalize prices to producers among the Six. These subsidies will be calculated similarly to the variable levies and will merely offset the difference in market prices. These subsidies will also be provided for exports to third countries outside the E.E.C. who have a lower price level than the one established within the E.E.C. In effect the system of variable levies and subsidies as proposed by the Common Agricultural Policy is nothing more than a variable quota system employed to develop the agricultural sector of the Community at the economic expense of the rest of the world.

The vaguest section of the agricultural agreement appears

to be concerned with price determination. While the goal of one single Community price was definitely established, the method for arriving at a convergence for all the widely divergent prices now in existence is not mentioned. It still seems to be uncertain as to whether the lower prices will be raised or the higher prices lowered. Presumably it will be the result of some combination of the two extremes although the direction of bias is unknown as well as the intended target prices. As in the past, member countries will be establishing their own prices subject only to the constraint that they not set a price above the German level or lower than the French level. These are the only two parameters directing the trend in agricultural prices which seem to be established as of yet, a severe limitation to any study attempting to project future demand and production within the Community.

Before leaving this brief presentation of the Common Agricultural Policy it must be pointed out that all provisions of the Common Agricultural Policy do not pose a threat to future international trade. Many trade restrictive features of the past will disappear as E.E.C. policies go into effect. Certain of the non-tariff trade restrictive devices such as quotas, mixing regulations for wheat, and state trading are scheduled to disappear. Many of these have already disappeared as of July 30, 1962.* According to a U.S.D.A. study made by

*Italian restrictions on United States feed grains, with the exception of grain sorghums have been lifted. United States poultry exporters have the opportunity to sell dressed poultry to Italy for the first time.

Hedges the removal of these non-tariff barriers could have considerable significance.

> When all non-tariff restrictions to trade are finally removed, the trade liberalization benefits should be considerable, unless these positive benefits are diminished or eliminated by other devices . . . (24, p. 6).

The natural question which arises is that, given the past trends in European agriculture coupled with the new Common Agricultural Policy, what is the implied prospect for U. S. exports of agricultural commodities to the E.E.C.?

The impact of economic integration upon third countries has been studied with increasing interest and intensity ever since Viner's path-breaking work (68). However, as pointed out by Johnson, Viner ignored consumption effects such that economic integration was either purely trade-creating or trade-diverting depending on whether production shifted from domestic to partner or from foreign to partner sources (27). For the present analysis, the repercussions described as trade creation and trade diversion play an important role in affecting future economic activity within the E.E.C. Consequently a brief discussion of these effects would be in order.

The effects of trade creation and trade diversion have become increasingly important in discussing the welfare aspects of economic integration and have been discussed by several economists recently, among these Balassa (4) and Thorbecke (39). References to trade diversion are generally concerned with shifts from low cost to a high cost source of

supply while trade creation refers to the opposite, i.e., a shift from high cost sources to a lower cost source. The world as a whole benefits more, the stronger the presumption of larger trade-creating effects than trade-diverting effects. The amount of welfare benefits the world as a whole receives appears to be related to the following: (1) the size of the union relative to world production, consumption, and trade, (2) the capacity for economies of scale within the union, (3) the amount of competitiveness and complementarity between the integrating economies, and (4) the relative size of the tariffs and other restrictions to trade both before and after integration between the countries comprising the union and between the union and the outside world.

The methodology adopted to study the welfare impact of economic integration generally distinguishes between the static and dynamic forces at work. The static effects consist of the production, consumption and terms of trade effects and from the standpoint of non-member third countries will be negative. These effects follow from the discriminatory results of removing intra-union tariffs while maintaining external duties. In essence the static effect measures the initial impact of the creation of the union on third countries now faced with a common external tariff barrier. As tariffs within the union are removed, trade creation and trade diversion take place with the result that exporters inside

and outside the union undergo changes in their export values following volume and price changes which are dependent upon the various supply, demand and substitution elasticities (for a rigorous analysis see 39, 27, 28). The extent to which outsiders will gain or lose by the establishment of the customs union depends, among other factors, on the level of the common external tariff and on the initial level of duties of member countries before integration.

The dynamic effects of economic integration consider the impact of economic union after adjustments within and outside the union have been made in the presence of economic growth and development. In other words, the dynamic effects result from the interrelationship between the size of the market and economic growth, the impact of internal and external economies, changing market structures, technological changes, investment activity and attitudes adopted towards risk and uncertainty in foreign trade. The dynamic effects of integration may be positive with respect to the non-participating countries. This positive effect results from the accelerated over-all economic growth within the union which yields an increase in union demand for imports, via the real income effect, and moves the terms of trade against the union (assuming constant domestic prices). The magnitude of the dynamic effects of integration are very difficult to establish in reality and very often boil down to personal opinion based on a priori knowledge. Quantitative estimates of effects demand a taxonomic approach

and often do little more than establish a higher trend rate for growth in integrated areas than is assumed would be obtained without integration (39, p. 9).

The specific problem we are concerned with, that of the impact of the E.E.C. upon future U. S. exports of agricultural products becomes essentially a question of the dynamic effects of integration upon the E.E.C. and third non-member countries. The trade-diverting effects of the Common Agricultural Policy are of a different nature than trade diversion as analyzed previously by other writers. While the establishment of a common tariff on manufactured goods leads to discrimination against exports of third country producers in favor of member country suppliers equivalent to the rate of common duty applied, the variable levy system in effect amounts to a variable quota. This arrangement will undoubtedly provide incentives for expansion in production in member countries with the result of probable self-sufficiency in many products and even surpluses in others. In order to appraise the consequences of the Common Agricultural Policy, a suitable framework or frame of reference must be established in which to operate. The absence of a combination growth and general equilibrium model in which the necessary relationships would appear explicitly and quantitatively demands the adoption of a more limited analysis.

The method of analysis consists of projecting production and demand quantitatively within the E.E.C. at some future

time period within the framework of probable E.E.C. policy and decision making. This requires assuming certain rates of increase in agricultural output, population and some measure of economic growth such as per capita income. Estimates of import demand can then be established as a measure of reconciliation between production and consumption subject to occasional modifications. One must note, however, that these projections are liable to a certain margin of error since even slight inaccuracies in the former can lead to relatively large effects on the residual estimate of trade.

Figure 1 illustrates the possible effects of the Common Agricultural Policy through the use of partial equilibrium analysis. DD and DD′ represent the demand curves of the Six for a given commodity before and after the enactment of the Common Agricultural Policy. The domestic demand curve becomes infinitely elastic at the intervention price as the marketing authority agrees to purchase any amount of domestic production at the intervention price. S_DS_D is the supply curve of the Six while $S_DS_D+S_F$ represents the total supply, foreign and domestic available to the community. P_T is the target price yielding a fair return to the domestic family farm, P_I represents the intervention price, and P represents the original equilibrium price in the community as a whole before the enactment of the agricultural policy. With the enactment of the policy, the target price is established and all foreign non-member suppliers have to pay a variable levy calculated as

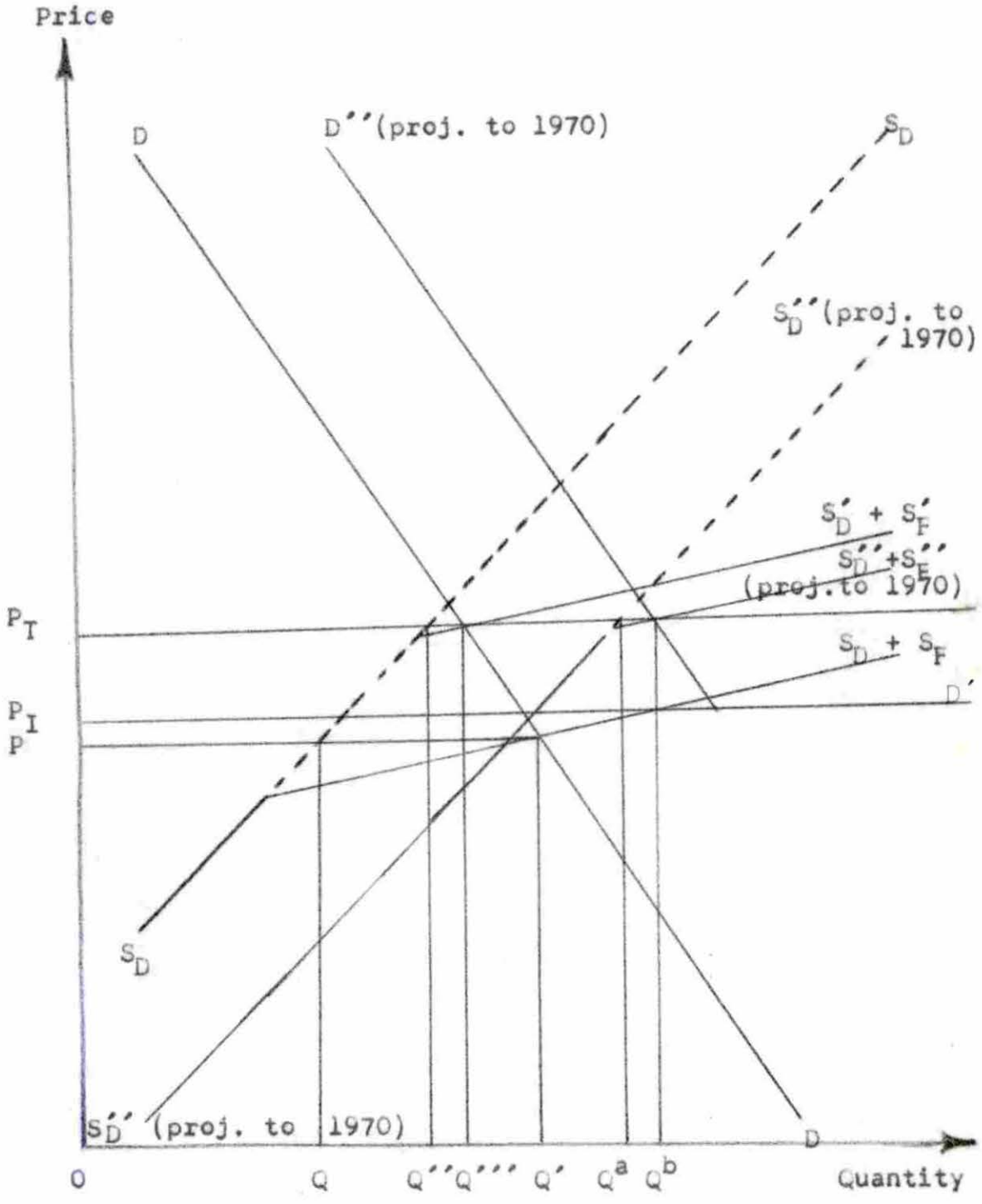


Figure 1. The impact of the E.E.C. Common Agricultural Policy on imports of agricultural commodities from third countries (partial equilibrium analysis)

the difference between the price of the low cost producer and the target price. This causes the S_D+S_F portion of the supply curve to shift upward until it intersects the domestic E.E.C. demand at the level indicated by the target price, becoming $S_D'+S_F'$. As a result, domestic needs are supplied through an increase QQ'' at home through increased intra-trade and production while imports from outside non-member countries decrease from QQ' to $Q''Q'''$. Thus far this is largely a static approach assuming the immediate attainment of a one-price system. This, however, is to be accomplished over the next ten-year period with the single price system for the Six not emerging until approximately 1970. If we examine the situation in this light, it requires the use of a dynamic analysis within the framework of the economic development of the Six. This requires projecting not only the change in demand of the Community, but also the change in supply potential as the agricultural sector of the Six develops through increased technology, capitalization, and protection under the influence of the Common Agricultural Policy. This dynamization can be shown through shifts of the demand and supply curves of the Community. The direction, and amount of the respective shifts depend upon the various supply, demand and substitution elasticities. $D''D'$ represents the change in Community demand while $S_D''S_D''$ represents the change in supply potential resulting from the interaction of economic forces over the transitional period. The final dynamic impact of the agri-

cultural policy, demonstrated by the shift in the domestic supply curve, indicates that after adjustments have taken place QQ_a will be produced within the Community and Q_aQ_b will be imported from third countries after domestic supplies have been absorbed assuming an increase in output absorbed by the Community as demonstrated by the shift in the domestic demand curve. The increase in domestic production within the Community amounts to QQ_a while the change in quantity imported amounts to the difference between QQ' and Q_aQ_b. It is assumed that the shifts in Community demand and Community supply of agricultural commodities are equal to the difference between the demand and output changes in the presence of economic integration (with the Common Agricultural Policy) within the Six as compared to the changes which would have taken place in the Six in the absence of integration. The lower the combination of population effect and income elasticity of demand and the higher the production elasticity in the E.E.C. for any given commodity, the greater will be the negative effects on imports from non-member third countries. Insofar as factor prices are affected by the rearrangement of production subject to the inauguration of the Common Agricultural Policy, the supply curves used in Figure 1, which are drawn on the usual assumptions of constant factor prices, may overstate the elasticity of response of production to price changes and so exaggerate the domestic effects analyzed above. Another point must also be made concerning the demand curves used. With the increase

in per capita income over time the elasticity response of the demand curve for agricultural commodities has been shown to decrease (50). Thus, the demand curve would not only shift to the right, but also would undergo a change in slope as well.

Beginning with the GATT analysis in 1956 (15), there have been numerous studies undertaken to project quantitatively the probable growth rates in the Common Market. The methodology underlying these estimates is extremely important in determining the relative accuracy of these predictions. The next few paragraphs will be concerned with describing some of the underlying assumptions, procedures and problems involved in estimating the parameters.

1. Production projection analysis

Discussion of trends in agricultural production in the E.E.C. demands consideration of the politico-economic factors influencing it. Goreux utilized a Cobb-Douglas function to develop a growth model to explain future growth in GNP which included a term for explaining the change in technology over time (20). The value of technology was measured from past trends and then extrapolated with a "good deal of judgment". The model of growth was calculated numerically for three types of economies: stationary and underdeveloped with stationary technology, underdeveloped and expanding, and developed and expanding. Table 40 gives the variables used in this model

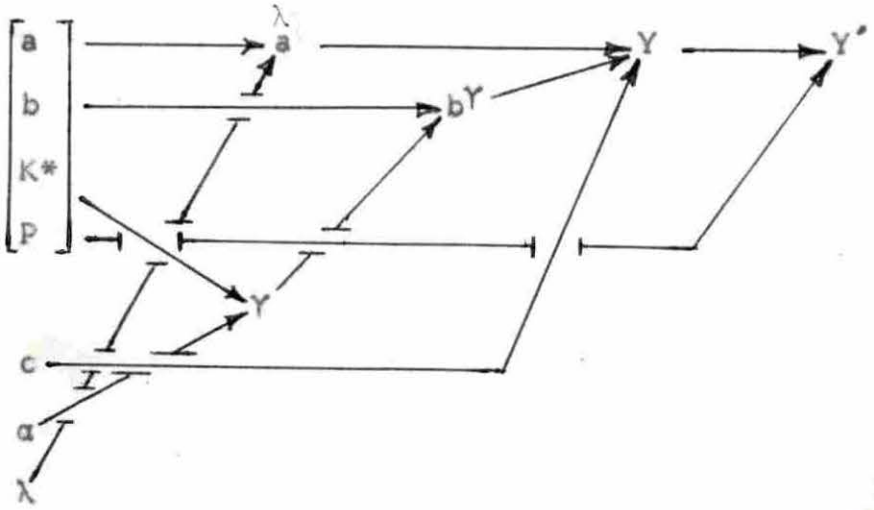
Table 40. Illustration of the Goreux model of growth

			Under-developed economy		developed economy
			Stat.	Exp.	
Parameters					
1. Elasticity of production in relation to labor.		a	0.3	0.4	0.65
2. Elasticity of production in relation to capital.		b = 1-a	0.7	0.6	0.35
3. Technological trend.		c	0.0	1.3	2.2
4. Net yearly increase in non-human investment as a percentage of GNP in preceding years.		α	5.0	7.6	14.0
5. Average capital-output ratio (stock of non-human capital over current GNP).		K*	2.5	2.5	3.5
Rates of growth of the variables (% per year)					
6. Population		P	2.0	2.0	0.75
7. Active labor force in man-hours.		λ	2.0	2.2	0.6
8. Non-human capital.		$\gamma = \alpha/K^*$	2.0	3.0	3.9
9. Contributions to increment of GNP					
labor force		$a\lambda$	0.6	0.9	0.4
capital		$b\gamma$	1.4	1.8	1.4
trend		c	0.0	1.3	2.3
10. GNP		$y = a\lambda + b\gamma + c$	2.0	4.0	4.0
11. GNP per capita		$y' = y-P$	0.0	2.0	3.3
Derived values of parameters characterizing other models					
12. Rate of increase of labor productivity		$\mu = y - \lambda$	0.0	1.8	3.4
13. Increment capital-output ratio		$K = \alpha/y$	2.5	1.9	3.4

[a]Source: (20).

along with the computed values for the variables as determined by Goreux in his study.

a, b, K* and P are data assumed given to the policy maker. c, α and γ become possible instrument variables available for use by the policy maker in that they can be directed by specific government policies. These national policies could consist of stimulated research, education, training and institutional improvements in the case of technology, monetary and fiscal policies in the case of investment, and policies governing full employment, retirement ages and working hours in the case of the labor variable. The causal ordering of this model, with Y or Y′ as the given target, would appear in the following manner:



Another model, which was developed by Krause aimed at describing the politico-economic factors involved in the Common Market situation (29, p. 117). The variables used in the model are the following:

EXOGENOUS VARIABLES

Instruments

P_a = prices paid to agricultural producers

G_a = government policy with respect to land usage

Other data

L_a = size of the agricultural labor force

T_a = level of agricultural technology

P_k = prices paid by the agricultural sector for inputs other than labor

ENDOGENOUS VARIABLES

Target

Y_a = income accruing to the agricultural sector

Irrelevant variables

C_a = total consumption of agricultural products

M_a = net imports of agricultural products

H_a = number of hectacres under cultivation

K_a = total costs involved in agricultural production other than labor

O_a = total output of the agricultural sector

Krause developed the following model utilizing the above variables:

$$(1)\ \frac{Y_a}{L_a} = \frac{P_a O_a - O_a \frac{K_a}{L_a}}{L_a}$$

$$(2)\ O_a = f_1(L_a, H_a, K_a, T_a)$$

$$(3)\ \frac{K_a}{O_a} = f_2(P_a, P_k)$$

$$(4)\ H_a = f_3(P_a, G_a)$$

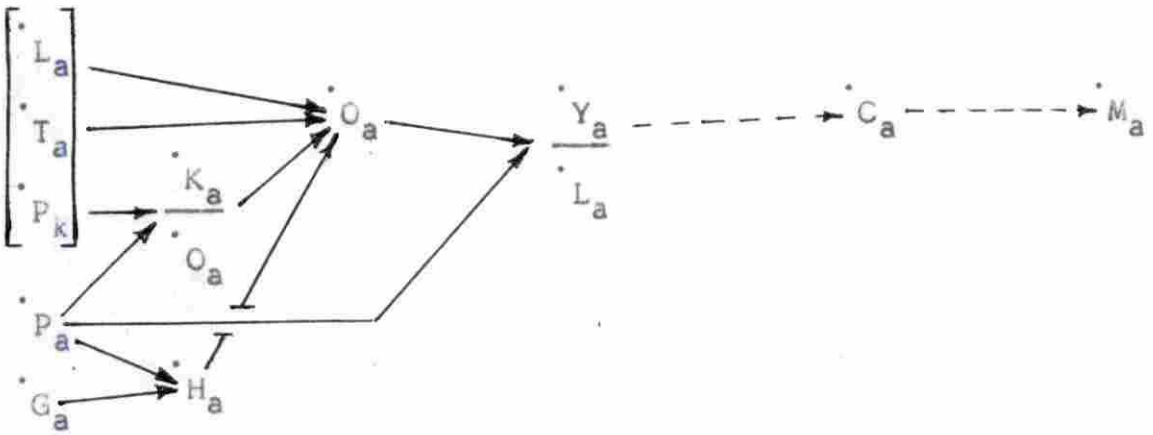
The constraint equation is:

$$(5)\ O_a = C_a - M_a$$

The time rate of change in $\frac{Y_a}{L_a}$ is:

$$(6)\quad d/dt\ \frac{Y_a}{L_a} = d/dt\ O_a + d/dt P_a - d/dt \frac{K_a}{O_a} - d/dt L_a *$$

The relationship of the variables in a model can be made much more clear through the use of a causal ordering arrow diagram.



When this is done for the model previously outlined, the framework for projecting the amount of income accruing to the agricultural sector becomes quite clear.** In using this type of a model the policymaker is faced with several alternative procedures. A given level of per capita income can become the target and the model solved for the values of the instrument variables, government land usage policies and agricultural prices. There is one policy degree of freedom within the model

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*By choosing appropriate unit values of the indices the levels of the variables drop out of the derivative, i.e., $P_a = 2$, $O_a = 1$, $L_a = 1$, and $K_a = 1$.

**The dot notation above each variable refers to the time rate of change of the variable.

because there are two instrument variables present and only one target variable. The policymaker must assign a value to one of the instruments and then solve the model in terms of the remaining instrument variable. On the other hand, the value of the instrument variables can be established and the model solved to determine the level of income accruing to the agricultural sector. If the given values of the instruments are not consistent with Y_a the policymaker may choose to revise Y_a. The former procedure best describes the method used by the E.E.C. The target of the common agricultural policy is to guarantee a certain per capita income to the agricultural sector which is growing at a rate equivalent to the growth of per capita income for the community as a whole.

The impact of agricultural prices upon the agricultural economy is pointed up very clearly in this model. It is, however, very difficult to assess the impact of prices because of the complexity of their interaction in the agricultural economy. Work on price/supply responses for agricultural products has yet to evolve a satisfactorily applicable basis for analysis. Because of the complexity and uncertainties involved within the agricultural sector it is open to doubt whether any rigidly applied empirical method can ever be expected to give acceptable results (49, p. 20).

The most stable relationship in the model is the systematic one between per capita income and the value of output per

person employed in agriculture (50, p. 44). According to a GATT study on this structural relationship there is a strong correlation between gross output and agricultural income per person which seems to be stable and close enough to serve as a basis for predictions (18). Per capita income per farm laborer then becomes an important variable in estimating future productive capacity. Another important variable which must be considered simultaneously with per capita income is the changing size of the labor force in the agricultural sector. In most developing economies this labor force is declining relative to total population. This migration out of agriculture affects absolutely per capita agricultural income as well as total income attributed to the agricultural sector. The impact of these variables can be studied in the general framework of the aforementioned model to assess their over-all effect. Even in utilizing such a framework for reference, there are many inherent difficulties in estimating future agricultural production, even for a short period of time. The influence of weather can only partly be eliminated by taking three-year averages for the base periods. It is difficult to analyze and assess quantitatively the relationships between agricultural output and the inputs used in its production. The impact of technology and national policies in price structure throughout the economy cannot be fully anticipated as far as specific commodity projections are concerned. Thus the figures which are available and analyzed

can only be interpreted as quantitative expressions of the direction which developments in the present circumstances appear most likely to take.

The method of supply analysis most commonly adhered to is trend analysis with respect to yields, size of labor force, animal numbers, and land areas by commodities and countries for at least the past decade. The tool which is generally used is trend extrapolation, the arithmetic indications of which have been modified and interpreted in the light of particular facts and considerations of the agriculture sector of each country, along with the physical limitation on and possibilities for the production of each separate product. These arithmetic extrapolations are generally used to obtain the first numerical estimations concerning the general trends in supply of a given commodity. Many other considerations are then taken into account such as limitations of processing facilities, climatic restrictions and technological or biological possibilities. International comparisons play an important part in this methodology as past experiences and trends in the more developed countries provide significant insights into the economic development of the agricultural sector. Projections are usually made by successive approximations, altering them forward and backward until an over-all balance appears to be reached. With the backward linkage present in this type of analysis failure to use a successive approximation analysis would result in the development of a

vicious circle of never-ending estimation and adjustment within the framework of the model.*

2. Demand analysis

Domestic demand functions can be generally thought of as a relatively stable relationship compared to the supply side which can be subject to wide fluctuations, particularly in dealing with agricultural commodities. In estimating future domestic demand, a population variable, income variable (GNP, GNP/capita or industrial production index), and a relative price variable are generally used. The use of a variable dealing with changing inventories is generally ignored due to the lack of any consistent data, particularly in Europe. Inter-country comparisons are often found useful in shedding light on consumption patterns now observed in higher income countries which developing countries will probably eventually establish. The demand analysis should satisfy the following: (1) there should be statistical accuracy to the fit, (2) there should be an economic interpretation of the function in the framework of demand theory, and (3) there should be relative simplicity of computational procedures.

The demand function must imply a decline in income elasticity associated with a rise in per capita income. The

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*This results from agricultural GNP being a component part of total GNP as well as being an integrated part of the economy. Growth in total GNP affects growth in agricultural production through demand and prices which in turn leads to growth in agricultural incomes which leads to higher gross GNP.

effect of the price variable along with population change must also be implicit in the demand function. Population growth usually has a much greater impact on the demand for agricultural products than does growth in income.* There are, however, exceptions to this thumb rule in some of the more underdeveloped countries.**

The variable most often used in studying the income elasticity of demand for agricultural commodities is a measure of per capita income. This, however, is subject to certain modifications with respect to commodity classes. Age distribution of the population must be considered when dealing with commodities such as tobacco, alcoholic beverages, etc. The income elasticity of demand for agricultural raw materials must reflect final and intermediate uses of the commodity. Because of the difficulty of obtaining reliable input-output data the latter is usually adjusted after examining the related demand of the commodity to projected industrial activity. In calculating the income elasticity of demand, time series analysis appears to be the most appropriate. However, limits in the length of the series (number of years studied) and other

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*A 10 per cent increase in population generally is assumed to increase demand for agricultural products, especially food, an equal amount, i.e., 10 per cent. A 10 per cent growth in income increases demand for agricultural products only a proportionate amount.

**The income effect on the demand for food is about twice the population effect in such countries as Greece and Italy where population growth is low, income growth high and demand for high quality food still is far from the saturation point.

influencing factors limit its validity.

The reliability of a coefficient expressing the income elasticity of demand can be strengthened through use of an international comparison approach applied systematically to all food commodities in terms of calorie, protein and fat intake/capita. A test of consistency can be applied within each country and between countries on the basis of the caloric, fat and protein requirements of the present and future projected population. In case of discrepancies between derived and genuine estimates the measure of elasticity can be revised under the watchful eye of the nutritionists.

This is the procedure followed by the FAO in making their projections of demand for commodities for 1970 (46). They also experimented with co-variance analysis with 2-way stratification by country and by year. This made it possible to compare the income effect within the different countries over a period of time with the income effect between different countries over a given period of time. This procedure is a combination of time series and the international comparison approach.

Several functions have been used to estimate the income elasticity of demand from budget studies. A rigorous analysis of the nature of these functions and the general results obtained in applying them is given by Goreux and the FAO (20, 50). The reader is encouraged to examine these papers if there is interest in any specific analytic procedures for

estimating the income elasticity.

Once the level of the projected demand at constant prices has been determined, the next step is to estimate the influence of price change on demand. Price elasticity is generally known with less precision than income elasticity due to the lack of consistent time series data in most countries. The effect of price change on demand appears to be much larger in a low than in a high income country. Price elasticity is generally lower for a large group of food items than for single food items because of the high possibility of substitution between the different components.*

> In theory the absolute value of the price elasticity is equal to the sum of the income elasticity and of the various cross-price elasticities between the commodity under consideration and its substitutes (21, p. 13).

If no information is available and when possibilities of such are limited, the absolute value of the price elasticity at the retail level may be taken to be approximately equal to the income elasticity. When there are close substitutes, the price elasticity is in absolute terms higher than the income elasticity.

It becomes a real problem choosing the price level which yields the most significant results. Since demand equations depict a behavioral relationship, the price which the users of

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*For example, the price elasticity of demand for cereals is lower than the price elasticity of demand for rice. The price elasticity of demand for certain types of rice are lower than the price elasticity of demand for rice as a whole.

a commodity respond to should be used, i.e., retail prices for food stuffs and wholesale prices for raw material. However, the price elasticity measured at the retail level over-estimates the impact on final demand of a price reduction at the farm or export level as a function of the importance of the marketing or processing margin (50, p. A 22). The prices paid to the supplier could also be used in calculating the price elasticity of demand since it is the price relevant to the producer or exporter. Hence the elasticities would be calculated at the farm or import level, the latter relationships being derived from user's demand functions if variables pertaining to trader's behavior were included in the demand function. The question arises then whether to make these estimates at the retail or import level. Retail prices are generally chosen. The reason for this choice are the following (4, p. 21): (1) it is felt that relationships are more stable at the retail level since non-systematic changes in the marketing margins would affect the values of the coefficients at the import level, (2) retail prices are preferred to import prices since the latter are unit values rather than prices and are affected by the quality and origin of the imports, and (3) retail prices can be converted by use of purchasing power parity-ratios and can be employed in cross section and multi-country regressions.

The demand functionsthen are calculated with income elasticities estimated at the retail level with a downward

correction being made with regard to price elasticities. In the case of agricultural raw materials, Balassa (4) points out that lack of information on the structural relationships underlying the demand functions make it impossible to derive an unbiased estimate. This is the result of frequent parallel movements of price and demand in the industrialized countries which makes it impossible to regard price of imports as exogenous to the system. As a result, least squares estimation will yield biased values of the structural coefficients. Consequently, the price effect for raw materials is generally not estimated.

3. Import projection analysis

The general scheme for projecting future import requirements of the E.E.C. was the following:

(1) Commodity balance sheets for a given base period were prepared.

(2) Production of the major commodities was projected in the light of the politico-economic impact of the Common Agricultural Policy.

(3) Demand for the agricultural commodities was projected by major end uses and then adjusted to determine the demand at the farm level.

(4) The projected balance sheets were then prepared and examined. Net trade was not generally taken as the difference between projected production

and demand, but was established through the policy-makers examination of past trends, economic, political and social limitations, and international comparisons along with the projected difference between projected production and demand. The majority of the projections used in the following section were taken from the recent analysis of the FAO and were calculated in the above manner.

In making projections of this nature one of two methods is generally followed. One method uses an aggregate concept in which the agricultural sector as a whole is examined with regard to production, consumption, and net trade. The second method utilizes individual commodity analysis where estimates are made of the production, domestic demand and resulting net trade of certain important commodities. The latter method is the procedure which lent itself best to the purpose of this paper and is used in the following section to examine the prospective demand for certain U. S. agricultural products in the E.E.C. This type of analysis could be interlaced well with previous sections of the paper dealing with the commodity structure of U. S.-E.E.C. trade in agricultural commodities.

Before any specific projections can be made, values must be assigned to certain of the economic variables by the policy maker with which he may guide the direction of his estimates. The most important of these variables which will be considered is the measure of income growth measured both on a per capita

basis and also on the basis of total growth in income over the time period selected. Table 41 shows the changes in real GNP in the E.E.C. from 1950 to 1961 using 1953 as the base year. Real GNP has risen by 65 per cent in the E.E.C. from 1950-51 to 1960-61. This amounts to a growth rate of about 5.2 per cent over the 10-year period. The years 1953-55 have been used as the basis for several of the studies made by GATT (15, 18). It is interesting to study the changes in GNP from 1953-55 to 1961 comparing it to the prediction for the growth made by GATT. The rate of growth in this time period appears to be approximately 5 per cent. Various rates of growth of GNP have been projected over the past several years and range from a low of 3.25 per cent to a high of 5.5 per cent. (See Table 42 for a comparison of the various studies.) Per capita income growth rates are somewhat lower than the growth rates for total income ranging from a low of 2.5 per cent to a high of 4.7 per cent.

The most recent and thorough study has been made by the FAO (50). On the basis of 1957-59 statistics they project an annual growth rate in total income of 4.7 per cent and 5.5 per cent depending on which of the following assumptions is used. The high growth rate implies that the rates of growth laid down in national plans will be followed, implying an acceleration of past growth resulting in an approximate annual world growth rate of 5 per cent. (5 per cent in high income countries, 5 1/2 per cent in low income countries) The low

Table 41. Indices of real GNP in the E.E.C., 1950 to 1961[a]

Year	Real GNP	
1950	85.5	> 88.5
1951	91.5	
1952	94.9	
1953	100.0	> 106.4
1954	105	
1955	114	
1956	120	
1957	126	
1958	129	
1959	135	
1960	143	> 146
1961	149	

$$\frac{\text{Real GNP (1960-61)}}{\text{Real GNP (1950-51)}} = 165.0 \qquad \frac{\text{Real GNP (1960-61)}}{\text{Real GNP (1953-55)}} = 137.2$$

Index: 1953 = 100

[a]Source: (39, 55).

assumption is based on the trends of growth during the 1950's. It would appear quite likely that the annual growth rate of the Community would lie in the range of from 4 1/2 per cent to 4.7 per cent. This means that the upper bounds projected by GATT in their studies would be obtained (an increase in GNP of 150 per cent from 1955-1975) and that a suitable range on which to base projections would be from 4.0 per cent to 5 1/2 per cent. This would result in an annual growth of per capita income somewhere between 3.5 per cent and 4.7 per cent. This

Table 42. A comparison of the Economic growth variables of selected studies projecting the rate of economic growth in the E.E.C.

Study	FAO (50)			ECE-FAO (49)				GATT (15)[a]			U.N. (45)	
Year	1957-59	1969-71		1955-57	1964-1966			1953-55	1973-75	1959	1970	
Variable		low	high		1	2	3				A	B
Population (millions)	169	184		165.2		176.57		282	317	167.7	177.8	
(trend)	0.9	0.7				0.74			0.62		0.60	
(index)	100	123		100		106.9		100	112.5	100	106	
GNP per capita (dollars)	1,285	2,030	2,235	742	942	994	1,039	720	1,150	981	1,432	1,589
(trend)	4.9	3.9	4.7		2.7	3.3	3.8		2.5		3.5	4.5
(index)	100	158	174	100	127	134	140	100	160	100	146	162
GNP (billion dollars)	378	654	718					203	365			
(trend)	5.8	4.7	5.5						4.0			
(index)	100	173	190					100	180			
Income elasticity of demand for all food expressed in terms of:												
calories		0.1			0.11							
animal protein		0.6			0.59							
farm value		0.5			0.68							
Potential increase in per capita demand for all food expressed in:												
calories		0.3	0.4									
(index)				100	101		102					
animal protein		1.9	2.2									
(index)				100	111		114					
farm value		1.4	1.7									
(index)				100	109		111					
Potential increase in total demand for all food expressed in terms of:												
calories		1.0	1.1									
animal protein		2.6	2.9									
farm value		2.1	2.4									
(index)				100	116		118					
Ratio between income and population effects of total demand for food expressed in terms of farm value		2.1	2.6									

[a]Western Europe.

Table 42 (Continued)

Study	GATT (19)			
Year	1953-55	1973-1975		
Variable		I	II	III
Population (millions)	161	———	179	———
(trend)		———	0.55	———
(index)	100	———	111	———
GNP per capita (dollars)	720	1,230	1,425	1,620
(trend)		2.75	3.5	4.25
(index)	100	171	198	225
GNP (billion dollars)	116	220	255	290
(trend)		3.25	4.0	4.7
(index)	100	190	220	250

The "low" projection assumes a world rate of increase in GNP of about 4 %/anum (3.9 % in high income countries; 4.1 % in the low income countries).
The "high" projection assumes a world rate of increase in GNP of about 5 %/anum (5.0 % in high income countries; 5.2 % in the low income countries).

1. Table GNP growth of 127 (index: 1955-57=100).
2. Total GNP growth of 134 (index: 1955-57=100).
3. Total GNP growth of GNP of 140 (index: 1955-57=100).

A. Total growth of GNP/capita of 146 (index: 1959=100).
B. Total growth of GNP/capita of 162 (index: 1959=100).

I. GNP at 190 % of 1953-55.
II. GNP at 220 % of 1953-55.
III. GNP at 250 % of 1953-55.

Table 43. A comparison of the economic growth variables of selected studies projecting the rate of economic growth in the agricultural sector of the E.E.C.

Study		GATT (19)				U.N. (44)			Krause (29)		
Year		1953-55	1973-1975			1955	1975		Target	Short	Long
Variable			I	II	III		1	2		Run	Run
Food consumption (value)[a]		18.15	27.23	29.95	32.67						
- imports of coffe, tea, & cocoa		0.66	0.99	1.09	1.19						
- imports of other foods	A.		-----	-----	-----						
	B.	1.36	1.36	1.30	1.36						
	C.		2.72	2.72	2.72						
+ production of ag. raw materials		0.35	0.64	0.72	0.80						
- gross ag. prod.	A.		26.88	29.50	32.28						
	B.	16.40	25.52	28.22	30.92						
	C.		24.16	26.86	29.58						
Indices[b] of:											
Income/person employed in agriculture		100	171	198	225						
Gross output/person employed in ag.		100	181	219	254						
Total gross output	A.	100	163	179	196						
	B.	100	154	171	187						
	C.	100	146	163	179						
Agricultural labor force	A.	100	90	82	77						
	B.	100	85	78	73.5						
	C.	100	81	74.5	70.5						
Agricultural population											
per cent of total population						28.0	22.0	17.0			
index (1955=100)						100	120	140			
trend									----	1.2	2.0-2.5
Agricultural production											
total agricultural output (index 1955=100)						100	133	141			
total livestock prod. (index 1955=100)						100	139	153			
trend of total agricultural output									----	2.0-2.5	1.0-1.5
Change in agricultural prices											
trend									----	1.0	-------

[a] 1000 million dollars at 1953-55 prices.

[b] 1953-1955 = 100.

Table 43 (Continued)

Study	GATT (19)				U.N. (44)			Krause (29)		
Year	1953-55	1973-1975			1955	1975		Target	Short Run	Long Run
Variable		I	II	III		1	2			
Change in purchased supplies trend								----	- 0.5	-0.3
Change in the per capita income of the agricultural sector (trend)								+3.3	3.7-4.2	2.7-3.7

I. GNP at 190 % of 1953-55.
II. GNP at 220 % of 1953-55.
III. GNP at 250 % of 1953-55.

A. Agricultural labor force such that imports of non-tropical foods is nill.
B. Agricultural labor force such that imports of non-tropical foods is as high as 1953-55.
C. Agricultural labor force such that imports of non-tropical foods is twice that of 1953-55.

1. GNP rises by 60 per cent above 1955 by 1975.
   Population rises by 10 per cent above 1955 by 1975.
2. GNP rises by 100 per cent above 1955 by 1975.
   Population rises by 20 per cent above 1955 by 1975.

appears to be a logical range of growth in which to operate when one considers the previous growth trends and the probable impact of economic integration upon the Six.

Annual population growth estimates are very consistent in that they fluctuate within a rather small range, i.e., 0.55 per cent to 0.74 per cent in the various studies. The rate of annual population growth chosen by the FAO of 0.7 per cent seems to be a consistent estimate given that the fertility rates remain constant and that there is a slight increase in life expectancy at birth. Migration is a minor factor and adjustments for this variable are usually made in an arbitrary manner. This projection indicates a probable Community population of 184 million in 1969-71. A word should be mentioned about possible changes in the agricultural labor force when discussing population trends. The maintenance of the same rate of growth in per capita income both in the agricultural and non-agricultural sectors would result in a widening of the gap between agricultural and non-agricultural earnings. This would make employment in industry much more attractive and result in a probable transfer of labor from agriculture to industry. If expansion in the industrial sector results in a movement towards ruralization of new industry location this effect could be very significant. GATT pointed out that the attraction of industry could bring about a transfer of labor from agriculture to industry exceeding the original 10 per cent reduction of the agricultural labor force originally

predicted from 1953-55 to 1973-75 (18). This migration is bound to have an effect on the ability of the E.E.C. to reach self-sufficiency in production and thereby reduce its demand for agricultural imports of the non-tropical variety of which we are so vitally interested. The GATT study showed that the decrease in the agricultural labor force necessary to maintain E.E.C. imports of non-tropical food products at their present levels must occur at an increasing rate as GNP increased above the 190 per cent target level (18). It is impossible to be specific in projecting the change in the agricultural labor force within the framework of dynamic economic integration within the Six. It is safe to assume, however, that it will decrease by at least 10 to 20 per cent over the 20 year period from 1953-55 to 1973-75. This estimate is based on the GATT study along with Coppock's estimate that the labor force in agriculture would decline by 5.5 million in Western Europe between 1955 and 1970 leaving an agricultural labor force of 25.6 million people. This change in the agricultural labor force is equivalent to a decrease of 17.7 per cent in the agricultural labor force or an annual rate of near -1 per cent. Coppock hypothesized that this total decrease could be as high as 20 per cent in the Northern European countries (9).

The potential increase in total demand for all food expressed in terms of farm value appears to be approximately 2.1 per cent per year. Both studies by the ECE/FAO and the recent FAO survey indicate this to be the case, the high

growth rate of the former study being the same as the low growth rate of the latter study (49, 50). The upper estimate would appear to be approximately 2.4 per cent which would follow a growth rate in GNP of 5.5 per cent.* The income elasticity of demand for all food is extremely low, being only 0.1 per cent. The income elasticity of demand measured at farm value is much higher, lying somewhere around 0.5 per cent (see Appendix Table 67). The difference between the two estimates can be attributed to the changing tastes of the consumer accompanying increases in income. Assuming an annual increase of 3.9 per cent in per capita income, the policy maker can figure roughly on a 1.3 to 1.4 per cent increase in per capita demand for all food. These general estimates of the aggregate trends appear to be very consistent in all of the various studies in this area.

No specific effect can be anticipated with regard to the impact of the Common Market upon agricultural productivity. Food consumption, however, will be affected by growth of per capita income. This increase in demand will fall short of the increase in production that would result from the condition that agricultural incomes rise at the same rates as incomes in general within the E.E.C. This is the result of a relatively slow increase in demand for food products resulting from

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*The FAO assumes that the annual population growth will be 0.7 per cent regardless of the income growth assumption.

Table 44. Food production and consumption rates[a]

	Area		
	E.E.C.	Other Western Europe	North America
Food production as a percentage of total ag. prod. 1957-59	99.0	99.0	90.0
Food production as a percentage of total world prod. 1957-59	14.2	6.1	31.9
Production trends 1952-1960			
all ag. commodities	2.7	1.8	1.6
food commodities	2.8	1.8	1.9
Projected demand for the 1960's			
"low"	1.8	0.9	1.9
"high"	2.1	1.1	2.1

"low" projection assumes a world rate of increase in GNP of about 4% per annum. "high" projection assumes a world rate of increase in GNP of about 5% per annum.

[a]Source: (50).

higher incomes, along with the fact that higher per capita income of personnel employed in agriculture entails a proportionally larger increase in output per person. The former is the implicit result of the limitation placed upon food consumption by the capacity of the human stomach. The latter follows from studies of output value per person employed in agriculture and

> . . . suggests that any increase in income (at constant

> prices) can only be brought about by a more than proportional increase in purchased non-agricultural materials and equipment, and therefore the volume of output (which is simply the sum of income and such purchases, both taken at constant prices) must also, for technological reasons rise faster than income (18, p. 36).

This characteristic is demonstrated in Table 44 where the past production trends in food products is greater than the projected growth rate in demand during the forthcoming decade. The only conclusion which one can reach is that domestic supply will provide more and more of the domestic demand needs in the E.E.C. and that the value of net imports will decline as the Community becomes self-sufficient in agricultural and food products.

This chapter has presented the fundamental principles of the Common Agricultural Policy and the effects it may have upon economic growth in the agricultural sector of the E.E.C. In addition, a review of selected studies dealing with the future economic growth of the Community was presented. It would now seem expedient to examine the future net import position of the Six with regard to agricultural commodities orientating the analysis toward the United States' position in this future market.

B. Projections of United States Exports of Selected Agricultural Commodities to the Six in 1970

Within recent years 80 per cent of United States exports of agricultural commodities to the E.E.C. countries has been

concentrated into six commodity groups: wheat and flour, coarse grains, meat and meat products, fats and oils, cotton and raw tobacco. The future trends in United States exports of agricultural commodities to the E.E.C. will be estimated by concentrating on these products.

1. Cereals

The grain program is the most important component of the Common Agricultural Policy. Grain is the major input in production of livestock as well as accounting for some 45 per cent of the E.E.C. cropland. The price instrument enters into the complicated agricultural model through the grain program affecting the level of farm income, consumer food prices, and value of net imports through the use of the target price assigned to the various grains. The national policy employed in the case of grains uses in its entirety the variable levy system outlined in the previous section, i.e., the establishment of target and intervention prices coupled with the use of a variable levy to insure the Community that imports will not enter the market at prices below the target price. From the target price a threshold price is established with which to calculate the variable levy. This amounts to adjusting the target price to market costs and quality differences plus adding a "lump sum" (montant forfeiture). This establishes the basis from which the variable levy is calculated with respect to the low cost non-member producer. The use of the

Table 45. Limits for "Target Prices" of grains in E.E.C. member countries 1962-63[a]

Grain	Limits	
	"upper"	"lower"
Wheat ($/metric ton)	118.92	89.42
($/bushel)	3.24	2.43
Barley ($/metric ton)	103.06	71.42
($/bushel)	2.24	1.55
Rye ($/metric ton)	108.17	65.71
($/bushel)	2.75	1.67
Corn ($/metric ton)	not specified	62.40
($/bushel)	" "	1.58

[a]Source: (31).

"lump sum" in effect guarantees additional protection to the Community producer. Examples of these prices for the years 1962 and 1963 are shown in Tables 45, 46, and 47. It is the plan of the E.E.C. to have the numerous member-country prices converge to a one-price system by 1970. The eventual level of the target prices has not yet been specified. The target price is, however, expected to lie somewhere between the recent French and German support levels for wheat of $2.17 and $2.92 per bushel in 1962. Regardless of the absolute level of prices there will undoubtedly be some attempt set in motion to adjust these levels such that the coarse grains and wheat substitute more readily for each other. The wheat prices are the politically sensitive prices over which much debate is

Table 46. Grain intervention prices in E.E.C. member countries 1962-63[a]

Grain	Country					
	France	Germany	Italy	Nether-lands	Belgium	Luxembourg
Wheat ($/metric ton)	87.46	110.62	102.40	84.25	95.40	111.00
($/bushel)	2.38	3.01	2.79	2.29	2.60	3.02
Barley ($/metric ton)	71.07	95.88	--	--	78.80	--
($/bushel)	1.55	2.09	--	--	1.72	--
Rye ($/metric ton)	71.20	100.62	--	--	74.00	--
($/bushel)	1.81	2.56	--	--	1.88	--
Corn ($/metric ton)	81.97	--	--	--	--	--
($/bushel)	2.08	--	--	--	--	--

[a]Source: (31).

Table 47. Grain threshold prices in E.E.C. member countries 1962-63[a]

Grain	Country					
	France	Germany	Italy	Nether-lands	Belgium	Luxembourg
Wheat ($/metric ton)	95.54	121.00	109.60	91.99	98.20	116.20
($/bushel)	2.60	3.29	2.98	2.50	2.67	3.16
Barley ($/metric ton)	76.93	106.75	62.59	77.35	81.60	81.60
($/bushel)	1.67	2.32	1.36	1.68	1.78	1.78
Rye ($/metric ton)	77.46	110.12	98.59	67.68	75.60	109.00
($/bushel)	1.97	2.80	2.50	1.72	1.92	2.77
Corn ($/metric ton)	86.57	108.00	60.99	70.44	77.60	77.60
($/bushel)	2.20	2.74	1.55	1.79	1.97	1.97

[a]Source: (31).

taking place. Feed grain prices, however, are becoming the more important in the Community as the demand for feeds continues to grow.

Wheat has been moving toward a position of self-sufficiency within the E.E.C. in the past few years. This is the result of increases in production within the Community over the past years by all of the member countries. Consumption while at the same time increasing, has not kept pace with the rapid increase in wheat production. This is a direct result of the income elasticity of demand for wheat (-0.3 for the E.E.C. as a whole) which has brought about an actual decline in per capita consumption. This decline has been compensated for by population growth and by a changing position of wheat with respect to net imports.

Coarse grains include grains normally used for animal feeds, i.e., oats, barley, corn (maize), sorghum and rye used for human consumption. Production in the coarse grains has expanded rapidly over the past years with barley and maize yielding the greatest increases. Growth in consumption of the coarse grains has, however, exceeded the growth in production resulting in a strong market for imports of coarse grains of which the United States has been the major supplier. This growth in consumption comes as a result of the increased feeding of meat-producing animals as the dietary habits of the E.E.C. peoples have adjusted to higher incomes.

The projection study of future production consumption

Table 48. E.E.C. grain balances for 1958 (1957-59) and projections to 1965 and to 1970 (1969-71) (million metric tons)[a]

Year	Production	Consumption			Net Trade
		Seed	Food	Feed	(Balance)
1957-59					
wheat	24.9	2.2	20.0	4.6	-1.9
coarse grain	25.6	4.3	2.8	25.9	-7.4
Total	50.5	6.5	22.8	30.5	-9.3
1965					
wheat	27.4		28.2		-0.8
coarse grain	28.1	--	--	--	--
Total	55.5	--	--	--	--
1970 "low"					
wheat	31.2	2.1	20.0	6.5	2.6
coarse grain	33.7	5.0	2.6	36.0	-9.9
Total	64.9	7.1	22.6	42.5	-7.3
1970 "high"					
wheat	31.2	2.1	20.0	6.7	2.4
coarse grain	33.7	5.1	2.4	37.4	-11.2
Total	64.9	7.2	22.4	44.1	-8.8

"low" and "high" refer to the GNP growth assumption of the FAO

[a]Sources: (49, 50).

and net imports in grains and preparations uses as a base the projections made by the FAO (50). These projections are shown in Table 48. This study uses 1957-59 as its base year with the target year being 1970 (1969-71). National agricultural policies are assumed to remain essentially the same as in the base period and relative prices are assumed constant in the period of the study. The "lower" projection is based on an annual growth rate of 4.7 per cent of total GNP while the "high" projection assumes an annual growth rate in total GNP of 5.5 per cent. Population is assumed to grow at 0.7 per cent annually.

These projections ignore the effect of the E.E.C. Common Agricultural Policy and the impact of the variable levy system upon cereals and preparations. Learn adjusts the "high" projections of the FAO according to the probable effects upon the grain industry resulting from use of the various supported price levels (31), as seen in Table 49. Table 50 shows the various prices used by Learn in establishing the total effect of the different price levels. Analysis of the probable effects of different prices on the production of grain in the Community boils down to a study of the impact of these prices on the French agricultural sector. With production already at a relative maximum in Germany and the Benelux countries, and the already high prices of Italy, the only probable expansion would take place in France. At present France is

Table 49. Effects of alternative E.E.C. price policies upon net grain balances in 1970 (1969-71) (million metric tons)[a]

Price Policy	II	III	IV
Production	+4.5	+3.0	+0.9
Consumption	-0.9	--	+0.9
Net effect on E.E.C. imports of grains	-5.4	-3.0	--

II = E.E.C. policy and the German price level.
III = E.E.C. policy and an average of the German and French price levels.
IV = E.E.C. policy and the French price level.

[a]Source: (31).

producing 39 per cent of total grain with 41 per cent of the total grain area. France has the lowest level of prices to date and exceeds only Italy in yield per hectacre and in fertilizer use. Learn estimates that under the high price supported policy (German grain price level) production in France would expand to 4.5 million metric tons. This figure was arrived at by estimating the increase in land usage at 1.5 million hectacres (17 per cent of the present French grain area and 7 per cent of the total E.E.C. area) with projected grain yields of 30 quintals per acre.

The effect of the Common Agricultural Policy is expected to be significant even if the low (French) price level is used as the target price. Under this assumption, E.E.C.

Table 50. The value of feed consumed by cattle, hogs, and poultry under the alternative price assumptions in the E.E.C.[a]

Price Assumption	Price ($/metric ton)	Grain Consumption (million metric ton)	Value (million $)
German threshold price of barley	107	41.6	4,451
Average of French and German threshold prices of barley	92	42.5	3,910
French threshold price of barley	77	43.4	3,342
c.i.f. price of United States barley	58	44.5	2,581

Table allows for changes in consumption of livestock prices due to lower prices.

[a]Source: (31).

Table 51. Producer prices for wheat and barley (1958-60 average)[a]

Country	Grain				
	Wheat		Barley		Barley as a percentage of wheat[b]
	($/100 kg.)	($/bu.)	($/100 kg.)	($/bu.)	
Belgium-Luxembourg	9.33	2.54	7.45	1.62	79.8
France	7.34	1.99	6.12	1.33	83.4
Germany	9.96	2.71	9.42	2.05	94.6
Italy	11.13	3.03	7.78	1.69	69.9
Netherlands	7.89	2.15	7.25	1.58	91.8
E.E.C. total (arithmetic ave.)	9.13	2.49	7.60	1.65	83.2
United States	6.47	1.76	4.04	0.88	62.4

[a]Source: (31).

[b]Comparative weight basis.

production will increase by 0.9 million metric tons in comparison to an increase of 3.0 million metric tons under a price level equivalent to an average of French and German prices.

The human consumption of cereals and related products as final demand appears to remain relatively constant as the population increase slightly more than offsets the decline in per capita consumption. Increased usage is expected in feed uses as meat production increases. The amount of this increase is directly related to the impact of technology on the feeding industry with regard to feeding practices as well as government policies with regard to protection and encouragement of the meat industry. Human consumption is expected to be slightly influenced by price changes and it is often hypothesized that quality limits would result in more of a decrease in consumption than changes in prices. With these tendencies in mind Learn predicts a decrease in consumption of 0.9 million metric tons with the use of the German price level and an increase in consumption of 0.9 million metric tons with the lower French price level. A price level depicting an average of these two price levels would result in little if any change in Community consumption.

By integrating the aforementioned price effects into the FAO study, Learn predicted the E.E.C. net imports of grains in 1970 under the various price assumptions.

The reader will note that Learn's projections for total

imports into the Community have been adjusted by the author. Learn assumed that exports of grains from the E.E.C. would be the same in Case I as in 1957-59, i.e., 2.1 million metric tons and would be zero in each of the following cases. It is hypothesized that the E.E.C. may well become even more important as a world supplier of grains in the next ten years, so an assumption of zero exports in 1970 will underestimate the demand for total imports in the Community. While there is serious question as to the Six increasing their share in the world market, one can safely assume that they will probably retain a similar import-export pattern of trade in grains through 1970 as they had in 1957-59. Under this assumption net imports represent about 81.6 per cent of total imports, the difference being the value of exports of grains by the E.E.C. When the projections of total import demand are adjusted to a continuance of this relationship, the projections of import demand by the E.E.C. for grains are shifted upward as indicated.

Using the projected value of total imports of grains by the E.E.C. in 1970 we can now proceed to estimating the quantity of exports of grains to the E.E.C. by the United States in 1970 (1969-71). The E.E.C. is expected to become a surplus producer of wheat by 1970. The demand for foreign wheat will then be restricted largely to quality hard wheats and some quantities of Durham wheats which can be used for blending

Table 52. Imports of grain into the E.E.C., 1957-59 and projections to 1970 (million metric tons)[a]

	1957-59	1970[b]			
		I	II	III	IV
Net imports	9.3	8.8	3.4	5.8	8.8
Total imports (Learn)	11.4	10.4	3.4	5.8	8.8
Total imports (adjusted to same import-export structure as in 1957-59)		11.88	4.67	7.97	11.88

I. Continuation of present national policies.
II. Adoption of the German price level for grains.
III. Adoption of the average German-French prices for grains.
IV. Adoption of the French price level for grains.

[a]Source: (31).

[b]Based on the FAO high annual income growth assumption of 5.5 per cent for the E.E.C.

purposes. These high protein wheats cannot be grown successfully within the Community. Quality requirements will undoubtedly become more stringent. In past years Canada has demonstrated a competitive advantage over the United States in regards to quality dependability per shipment. Past trends indicate that the United States is losing its competitiveness in the Common Market, her share falling from 32 per cent to 22 per cent during the time period from 1954-56 to 1959-61. If this trend continues the United States would have only a 10 per cent share in the Community wheat market by 1970. Learn estimates the need for these high protein wheats will be around

Table 53. United States exports of grains to the E.E.C., 1958 (1957-59) and projections for 1970 (1969-71) (million metric tons)[a]

Grain	1957-59	1970			
		I	II	III	IV
Wheat	1.1	0.4	0.4	0.4	0.4
Feed grains					
"low"	2.9	4.87	2.66	3.64	4.87
"high"		5.94	3.24	4.44	5.94
Total U. S. exports	4.0	5.27-6.34	3.06-3.64	4.04-4.84	5.27-6.34
Total E.E.C. imports	11.4	11.8	4.67	7.97	11.88

"low" assumes the U. S. share in the E.E.C. coarse grain market to be 41%.
"high" assumes the U. S. share in the E.E.C. coarse grain market to be 50%.

I. Continuation of present national policies.
II. Adoption of the German price level for grains.
III. Adoption of the average German-French prices for grains.
IV. Adoption of the French price level for grains.

[a]Source: (31).

1.5 to 2.0 million metric tons in 1970. If the United States retains her present share of the wheat market, she would sell 0.33 to 0.44 million metric tons of high protein wheat to the Six in 1970. For projection purposes the quantity of United States wheat exports is estimated to be 0.4 million metric tons in 1970 regardless of the price level employed.

The prospective market for United States coarse grains

will be dependent upon the price support level settled upon by the Community. In Table 53 two projections are made concerning United States exports of coarse grains. The low estimate assumes that the United States will continue to hold the present share in the E.E.C. coarse grain market. This share presently is 41 per cent. However, liberalization of dollar imports of coarse grains along with effective removal of certain bilateral agreements, particularly in Italy, could enable a possible expansion of the United States share in the E.E.C. coarse grain market to near 50 per cent by 1970 (31, p. 18). For a high estimate of United States exports of coarse grains to the Community it was assumed that the United States share in the E.E.C. market for coarse grains would be 50 per cent. United States exports of grains to the E.E.C. in 1970 could well vary between a low of 3.06 million metric tons to a possible high of 6.34 million metric tons. If the German price level is chosen the United States can plan on losing a certain portion of her current Community market for grains. This decline in demand for foreign imports of the coarse grains, which will be the bulk of our grain shipments, will result from production response to the higher price level, particularly in France as coarse grains and wheat substitute more competitively with each other.

If the average of the German-French prices are used to establish the price level, the United States can expect to just slightly more than maintain her present volume of grain

exports. If the French price level is selected, the United States may well see an expansion in the quantities demanded by the Six over the next 10 years. At any rate, the United States exports of grain will consist primarily of the coarse grains which will be used to supplement the rapidly growing livestock segment of the agricultural economy.

2. Meat and meat products

Exports of meat and meat products constitute the major portion of the commodity group of edible animals and animal products shipped to the E.E.C. as pointed out in an earlier section. The future prospects for United States exports of meat and meat products to the E.E.C. do not appear at all promising. The impact of the E.E.C. on demand for United States meat products has been favorable as of yet, as growth in per capita income prompted an increasing demand for meat and meat products. Meat products have a positive income elasticity of demand, and consumption of meats and meat products increases as incomes rise. This change is generally the result of shifts from starchy foods to the higher protein meat diets. The consumption patterns in the E.E.C. countries indicates an increase in per capita consumption of meats. The most significant changes can be expected in the expansion of beef and poultry consumption. This is indicated by the respective income elasticities of demand demonstrated by the coefficients representing the German demand for meats. While these

Table 54. Income elasticity of demand for meat[a]

Area	Elasticity Coefficient
Germany	
Beef and veal	≠0.9
Pork	≠0.4
Poultry	≠2.0
E.E.C.	
Total meat and meat products	≠0.6

[a]Source: (12).

coefficients cannot be thought of as representative of the E.E.C. in its entirety, they nonetheless point out the demand response for the various types of meat associated with an increase in income. Italy and Germany will remain the principal markets within the Common Market for meat products, with France and the Netherlands supplying an increasing amount of the meat products demanded in the Community. The extent of the increased demand for meat within the Six will be directly concerned with the increase in per capita income.

The total impact of economic integration of the Six upon future demands for United States exports of meat will be largely dependent upon the national agricultural policies adopted by the Community with regard to imports of meat.

> The policies concerning beef and veal are not yet known with certainty. The external tariff for beef as now proposed would be 20 per cent ad valorem for fresh, chilled or frozen beef and 16 per cent for live cattle.

> A levy on imports will be maintained to cover the difference between the gate price and the import price plus duty. To guard against any increase of frozen beef which might jeopardize the interest of the E.E.C. producers, the Commission is empowered to withhold import licenses (56, p. 11).

Pork and poultry plans have already been determined. The outline of the pork program is described in this manner:

> For trade with non-member countries the levy is made up of three parts. The first part consist of an amount equal to the difference between the "average price" of the importing member country and the "average price" fixed for the member country which has the lowest "average price" (for the time being the Netherlands). The second part consists of a sum equal to the difference between feed costs in the Netherlands and the world price. This second part and the third part are equal for all member countries. The third part consists of a rising sum. For the first year of the application of the system, this sum is equal to 2 per cent of the average price of imports into the Community from non-member countries during the previous year. During succeeding years this percentage will be raised annually to 3, 4, 5, 6, 6 1/2, and 7 per cent, and will be calculated on the average minimum price for the preceeding year (47, p. 61).

In addition, a minimum import price has been fixed for pigmeat, uniform for all members, which takes into account world feed grain prices and a representative rate of feed conversion in the exporting country. When an offering price falls below this minimum price (free at the frontier) the difference will be added to the levy. This minimum price for pigmeat and live pigs has been set at 54.3 and 41.8 units of account respectively.*

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*The unit of account is equal to 0.099,867 grains of fine gold which is equal to the par value of the United States dollar and equal to 4.94 francs and 4.03 DM.

The poultry regulations are outlined in the following manner:

> The member countries will charge on imports from outside countries:
>
> 1. an equalization fee to compensate for the amount by which feed grain prices in the importing country are above grain prices in international trade (basis 2.8 kg. of grain, of which 50 per cent is assumed to be maize, for 1 kg. of ready-to-cook poultry);
>
> 2. an amount equal to the duty member countries charge each other, which in the case of Western Germany is 10.5 per cent; (to be reduced annually until it reaches zero in 1970);
>
> 3. an amount equal to 2 per cent of the average price at which, during the preceding year, poultry was imported from third countries, rising gradually to 7 per cent by 1970;
>
> 4. a lock-gate price (or sluice price) based on world market prices of feed grain and a feed conversion factor for the exporting country. When f.o.b. offering prices are below this gate price, a fee will be levied which is equal to the difference between them. The lock-gate price will be fixed in advance for a period of three months, taking into account the trends in prices of feed grains on the world market, during the six months preceding the quarter in which the lock-gate price is fixed.
>
> The system is complex and different fees must be calculated for each type of bird and different ways of dressing. In practice much will depend on the details of these calculations, and in particular on the use of the gate price (47, p. 129).

In addition, member countries exporting poultry to non-member countries will receive a subsidy equal to the equalization fee they assess against imports. There will be ad valorem duties between the member countries in addition to an equalization fee reflecting the difference in feed grain

costs, both of which will be gradually reduced to zero by 1970. All in all the poultry system is very complex and judging by present appearances will discourage imports of poultry into the E.E.C.* The lock-gate price gives the possibility of excluding imports at very low prices. The impact of this policy upon tariff costs to United States producers brought about an immediate increase from 4.5 cents to 5 cents per pound to 12.5 cents per pound when the policy was enacted in 1962. This threatens to play havoc with United States exports of poultry products to Germany which is our principal foreign poultry market.

The future position of trade in meat in the structure of total world trade appears to be little different from the present position. The U. K., West Germany, Italy, and the United States will continue to be the largest markets for meat products. However, the impact of the E.E.C. could well affect the source of the supply going to the meat product markets within the Six. Germany and Italian demand for meat products is expected to grow at a faster rate than their domestic prod-

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*The lock-gate price resulted in the following calculation for one kilogram of ready-to-cook poultry imported by West Germany:

a.	gate price	DM	2.94
b.	equilization fee	"	0.48
c.	advvalorem duty (12.5%)	"	0.37
d.	Total	"	3.79
e.	German turnover tax	"	0.15
f.	Final Total		3.94

uction. The major portion of this growing import requirement is expected to be met by France and the Netherlands at an increasing rate. This is going to result in a shift from third country producers to intra-Community suppliers. Table 55 summarizes the production, consumption and net trade in meat and meat products for the E.E.C. Beef appears likely to account for approximately 2/3 of the total increase in meat demand in the E.E.C. with poultry accounting for a large percentage of the remaining 1/3. The E.E.C. demand for pork appears to be less favorable. This change in demand is expected to result from a slowing up in consumption of pork in the presence of rising incomes as consumers turn from pork to beef and poultry. The E.E.C. is unique in that total consumption of pigmeat has been greater than that of beef and veal whereas by 1970 the reverse is expected to be true.

The E.E.C. is 90 to 94 per cent self-sufficient in meat products at the present time as net exports of ham and pigmeat balance imports of beef and poultry. As previously mentioned, United States exports of meat and meat products to the E.E.C. consist of poultry and meat specialty items. The United States is vitally interested in the prospective market for these meat products.

The prospects for trade with the E.E.C. in specialty meats are very uncertain. These meat products are essentially by-products of hog and beef slaughtering. With increased production within the Community the future of these exports

Table 55. Production, consumption and net trade in meat and meat products in the E.E.C., 1958 (1957-59) and projections for 1970 (1969-71) (1000 metric tons and index 1957-59 = 100)[a]

	1957-59 prod.	1957-59 cons.	1957-59 net trade	1970-71 Production "low"	1970-71 Production "high"	1970-71 Consumption "low"	1970-71 Consumption "high"	1970-71 Net Trade "low"	1970-71 Net Trade "high"
Total meat									
index	100	100	100	145	148	141	149	41	152
volume	7106	7364	-258	10,303	10,517	10,383	10,972	-106	-392
Beef and veal									
index	100	100	100	155	155	144	153	21	132
volume	3027	3285	258	4692	4692	4730	5026	54	341

"low" refers to an annual growth in GNP of 4.7 per cent.
"high" refers to an annual growth in GNP of 5.5 per cent.

[a]Source: (50).

appears to depend completely upon personal taste preferences of the Community consumers.

The prospect for United States exports of poultry appear even more dismal. The phenomenal growth rate of poultry exports to the E.E.C. (primarily Germany) appears to have a very insecure future unless the restrictions imposed by the Common Agricultural Policy are relaxed. Three-fourths of United States exports of poultry in 1961 were concentrated on this by-now-protected market. Because of disease (Newcastle) and other discriminatory measures the United States is prohibited from entering the U. K. market and may well find herself with a surplus problem in poultry if the E.E.C. is successful in the application of the Common Agricultural Policy.

> This levy system probably will reduce United States exports to this area and greatly encourage intra-Community poultry production and trade. The price advantage due to our lower costs probably will be less important than the quality of bird for the specific market. In addition to higher entry price (broilers 44.6 cents, turkeys 57.4 cents) the advantage of locally produced birds may be 10 to 12 per cent or more depending on the rate of efficiency used in the levy formula (56, p. 12).

It is doubtful that the United States can maintain her present share in E.E.C. imports of meat products. A "low" and "high" estimate of the United States share of E.E.C. imports of meat products is made in an attempt to establish the probable range which will contain the quantity of United States meat products being imported by the Six in 1970. The "low" coefficient assumes that the United States supplies only

5 per cent of the future E.E.C. demand of meat imports. This would mean that the United States would eventually lose practically all of the German poultry market and would just maintain her present competitiveness in specialty items. The "high" projection assumes that the United States will supply 13.4 per cent of the E.E.C. import demand for meat products. This means that the United States would maintain the share of the E.E.C. market that she had in 1959-61. The "high" projection assumes that the United States can retain her present competitiveness in the light of the changing economic structure of the E.E.C. promoted by the national agricultural policies of the Community. This is highly doubtful unless trade concessions are granted to the United States by the E.E.C.

Under the "low" income growth assumption United States exports of meat and meat products are reduced very significantly and in the event that the "low" United States market share is realized, the market is, in all practicality, (assuming import-export structure of the E.E.C. stays constant), lost. This is not at all unrealistic when one considers that if the "low income growth" assumption proves to be true, there is quite likely going to be a surplus of beef on the market. Because of beef's high price elasticity of demand the market pressures would undoubtedly be reduced through a moderate price decline. This movement, coupled with the fact that the E.E.C. may not only reduce imports of poultry, but may well become a net exporter, paints a rather gloomy picture for

future United States exports of meat products.

The situation does not look quite so dismal under the "high income growth" assumption. However, one cannot help but conclude that the United States is going to lose a considerable market for her meat products. Under this growth assumption the larger import demand of the E.E.C. will provide a reasonable market for beef and veal while the outlook for poultry changes very little. The tendency for the E.E.C. to eventually attain the position of a net exporter of poultry products is quite strong under the present government policies because of poultry's wide acceptability and the favorable conditions for increasing production at decreasing costs. It is quite probable that under the "high income growth" assumption the tendencies for United States exports of meat products to the E.E.C. will lean toward the lower estimate.

3. Fats and oils

The outlook for United States exports of fats and oils to the E.E.C. appears to be very optimistic. The proposed Common Agricultural Policy for fats and oils aimed at creating a unified market in this area is the following:

> The proposed plan and schedule of import duties would result in a large measure of free trade between the Community and the rest of the world, in addition to free trade among the members of the Community. When the plan is fully in effect imports of all the commodities covered by the plan would be quantitatively unrestricted and oilseeds would be duty free. The oils produced from these and from domestic oilseeds would be free of any hindrances to distribution throughout the Community. The import duties on vegetable oils

Table 56. United States exports of meat and meat products to the E.E.C., projections for 1970 (1969-71) (1000 metric tons)[a]

U. S. Share of E.E.C. Total Imports	"Low Income Growth"	"High Income Growth"
Net imports	106	392
Total imports[b]	181.6	671.6
United States exports		
"low" (5 per cent of E.E.C. mkt.)	9.08	33.58
"high" (13.4 per cent of E.E.C. mkt.)	24.33	90.00

[a]Source: (50).

[b]Assuming import-export structure of the E.E.C. stays constant.

> would be relatively moderate, mostly 10 per cent for crude oils for eventual food use and 15 per cent for refined oils for food, with lower rates for fats and oils destined for non-food uses. Oilseed cakes and meals, the residue from the crushing of oilseeds, would be admitted duty free. The special measures to benefit domestic oilseed producers would consist of direct payments, production aids, and the like; prices would be determined by competition in the market (53, p. 14).

The proposed plan will result in a significant increase in free trade in fats and oils between the Six and the rest of the world. E.E.C. production of animal fats and oils is expected to rise simultaneously with the increase in domestic meat production. Hand in hand with this increase in annual production goes an increasing demand for the vegetable-originating fats and oils used in supplementing the feed rations. The E.E.C. is expected to remain a deficit area in fats and oils and countries not associated with the Six should

continue, as in the past, to supply the largest part of the Community's demand for fats, oils, and oilseeds. Demand for United States exports of soybeans and soybean meal seems to be very promising as the United States is expected to increase her exports to the Six in these areas considerably over the next 10 years.

The real concern with respect to the future United States position in the E.E.C. fats and oils market seems to be directly dependent on development of the Associated Overseas Members (AOM) as potential suppliers of fats and oils. E.E.C. imports from these areas amounted to 24 per cent of total E.E.C. imports in 1957-59. Under the proposed plan the producers in French, or former French territories will lose their guaranteed market in France, but in return their exports of fats and oils to the Six will not be subject to duty. This preferential treatment of the AOM will constitute a discrimination against third countries such as the United States. This preferential treatment, coupled with the fact that ownership of African production is generally in the hands of European users of oil seeds, indicates that there will be increased competition from this area as European industry increases the quantity of imports coming from their own sources of supply before turning to increased trade with other third countries. The AOM have shown an ability to produce oilseeds and as a result the investment of European funds in commercial agriculture in Africa will undoubtedly result in growth of the supply potential in the various oilseeds (29, p. 130).

There does not appear to be, at the present time, significant capacity within the AOM to provide for the entire market. As these countries are just in the developing state, it is extremely difficult to measure their impact on final demand in the E.E.C. for imports from third countries such as the United States. One thing must be kept in mind. The African countries provide groundnuts, groundnut oil, palm oil, palm kernels and palm kernel oil. An increase in production of these products takes much longer to achieve and needs as its major prerequisite, political stability and over-all managerial ability as the oil palm plantings are established. In many cases there is a strong need for government support of research and extension work to carry out these programs. All of these factors combine to obscure the probable impact of the AOM on future trading patterns.

The demand for imports of fats and oils within the Community is expected to increase through 1970. This is pointed out in the projections made by the FAO (50) (see Table 57). The production estimate is based on a continuation of linear trends (constant absolute rate of increase) which fit the production development of the 1960's. Future demand was estimated with a log inverse function assuming constant real prices. The assumption of constant real prices does not seem unreasonable when viewed in the light of observations that the general level of prices has been well maintained over the past few years despite the rising per capita supply of fats

Table 57. Production, consumption and net trade of fats and oils in the E.E.C. 1958 (1957-59) and projections to 1970 (1969-71) (million metric tons)[a]

1957-59			1969-71[b]		
Prod.	Disappearance	Net Trade	Prod.	Disappearance	Net Trade
2.0	4.0	-2.0	2.7	4.9	-2.2

[a]Source: (50).

[b]Assuming a growth in GNP of 4.7 per cent (low income growth assumption).

and oils and the loss of certain markets to synthetics (50, page II 19). Prices have shown little variation over the 7 year period since 1955.

Table 58 shows the projected trade pattern between the United States and the E.E.C. in 1970, assuming the import-export structure in fats and oils in the E.E.C. stays relatively constant. All of these projections are based on the FAO "low income growth" assumption. The "high" projection for United States exports to the E.E.C. assumes that the United States share of the E.E.C. market can be maintained throughout the next 10 years. This will require expansion of United States export of soybeans and soybean products as the shipments in animal originating fats and oils can be expected to decline in the face of growing production of livestock in the E.E.C. This also assumes that the share of the AOM in the fats and oils market stays constant or expands at the expense

Table 58. United States exports of fats and oils to the E.E.C. 1958 (1957-59) and projections for 1970 (1969-71) (1000 metric tons)[a]

	1957-59	1969-71[b]
E.E.C. total imports of fats and oils	4,885	5,380
E.E.C. net imports of fats and oils	2,000	2,200
U. S. exports of fats and oils to the E.E.C.		
"low"	1,557	1,184
"high"		1,722

"low" assumes the U. S. share of the E.E.C. market to be 22 per cent.
"high" assumes the U. S. share of the E.E.C. market to be 32 per cent.

[a]Source: (50).

[b]Assumes a growth of GNP of 4.7 per cent (low income growth assumption).

of third country non-member countries other than the United States, i.e., Canada, the Asian countries and the South American suppliers.* Much of the ability of the United States to remain in a competitive position will be determined by the relative price levels that exist. To date the United States has been able to compete very competitively with other foreign suppliers. The "low" estimate is based upon the assumption

*Mexico, Argentina, Brazil, Oceania, Egypt, Peru, Pakistan, Turkey and the Phillipines.

the the United States will lose 1/3 or 10 per cent of her present share in the E.E.C. market for fats and oils. This arbitrary estimate would be the result of (1) a lack of adequate growth in vegetable-originating oilseeds and oilseed products to offset the probable loss in share of the finished oil products market, or (2) the impact of the growth in production of the AOM under the E.E.C. aid programs aimed at developing these agricultural economies. The impact of these programs of development, particularly with respect to the tree originating oil products which are slow to develop could provide a serious threat to future United States exports of fats and oils.

4. Tobacco*

The prospects for United States exports of tobacco to the E.E.C. in 1970 appear to be a bit cloudy, though not as dark as some of the other agricultural commodities. The United States has been losing its competitive position in the E.E.C. tobacco market over the past 10 years and it appears that this trend may continue in view of the Common Agricultural Policy established for tobacco.

The Common Agricultural Policy established for tobacco designates a common external tariff of 28 per cent ad valorem

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*For a very complete analysis of the future tobacco trade, the reader is encouraged to read Vandendries's thesis (67).

with a minimum of 13.2 United States cents per pound and a maximum of 17.2 United States cents per pound on all imports coming from third countries. Previously, duties on tobacco in the Benelux countries and Germany had been of a specific nature while France and Italy had no import duty of any sort on tobacco. The United States produces a relatively high priced tobacco, most of which will be assessed at the maximum rate. This will immediately put the United States at a disadvantage compared to countries such as Rhodesia who produce a relatively low-priced tobacco.

Increased competition can be expected from the AOM. They will have the advantage of having their tobacco exports enter the Common Market duty free. The Six already absorb the bulk of the tobacco exports of the AOM. The bulk of these tobacco imports originate in the French-associated countries and in the past have been subject to no duty in France. As a result there will only be a slight increase in preference for these countries (free entry into the other five members of the Community), and the immediate effects of this common policy will not be as great as at first believed. This new policy, accompanied by continuation of European originating investment of capital in these areas, may well result in a stimulation of tobacco production. Any great expansion in production is going to require a shift from the dark air-cured and fire-cured tobacco they now raise to the flame-

cured American types which have such a high demand in Europe. This adjustment creates few problems as the climate and soil in these associated areas pose no obstacles to this aforementioned transformation.

The current reduction of internal tariffs of approximately 50 per cent provides an advantage for leaf tobacco moving from one E.E.C. member to another. Greece, a new associate member, and Italy stand to gain the most from this preferential treatment. If agreements are made with Rhodesia, the chief American competitor, and Turkey the resulting impact on United States exports of raw tobacco to the Community could be of significant proportions.

Several studies have been made concerning the future trade of tobacco with respect to the Common Market. Erdman and Rogge predicted an increase of tobacco requirements in the E.E.C. of 50 per cent from 1956 to 1975, an annual increase of 2.18 per cent (10). This meant that tobacco requirements in the E.E.C. would be approximately 450,000 tons in 1975. Production was predicted to increase by about 33 per cent over the same period which is an annual increase of 1 1/2 per cent. Table 60 gives the projections made by Vandendries in discussing the trade pattern ot tobacco in the E.E.C. for 1975, utilizing the growth projections of Erdman and Rogge (67). This analysis provided the basis for the author's projections of Community trade in raw tobacco in 1970.

1959-60 was chosen as the base year for projections

Table 59. Production, consumption and trade in tobacco in the E.E.C., 1956 and projections to 1975 (1000 metric tons and index 1956 = 100)[a]

	1956	1975	% Annual Increase
Consumption (volume)	300,000	450,000	2.18
(index)	100	150	
Production (volume)	150,000	200,000	
(index)	100	133	1.50
Inports (volume)	150,000	250,000	
from AOM	7,000	70,000	
from Greece	25,000	50,000	
from third countries	118,000	130,000	

[a]Source: (67 and 10).

describing the trade in tobacco in 1970. The "low growth projection" is based on Erdman and Rogge's original estimation of growth with respect to consumption and production within the Six, using 1956 as the basis for the projections. The "medium growth projection" is made assuming that the annual growth rate used by Erdman and Rogge was realized, i.e., 2.18 and 1.5 per cent respectively for consumption and production growth, using 1959-60 as the base year. Growth in consumption and production have been much more rapid from 1956 to 1960 than was earlier predicted. By using 1959-60 as the base year for the projections, an upward bias is achieved with respect to the earlier estimates. Finally, the "high growth projection" assumes a continuation of the growth in production

Table 60. Production, consumption and trade in tobacco in the E.E.C., 1959-60 and projections to 1970 (1969-71) (1000 metric tons and index 1959-60)[a]

	1959-60	1961-71		
		L	M	H
Consumption (volume)	333,000	408,000	413,000	436,200
(index)	100	122.5	124	131
Production (volume)	165,000	184,500	191,400	211,200
(index)	100	112	116	128
Imports (volume)	168,000	223,500	221,600	225,000
from AOM	26,444	43,250	43,250	43,250
from Greece	9,983	52,500	52,500	52,500
from third countries	131,573	127,750	125,850	129,250
of which				
United States "low"	52,100	42,465	42,104	42,750
"high"		67,050	66,480	67,500

"low" assumes the U. S. share of the E.E.C. market to be 19 per cent.
"high" assumes the U. S. share of the E.E.C. market to be 30 per cent.

L, M, and H refer to the various growth rates discussed in the text.

[a]Source: (10 and 67).

and consumption achieved from 1956 to 1961 over the next ten years. This does not seem unrealistic in light of the expected growth in GNP within the Community. All of these projections could, however, be affected by the establishment of cancer-smoking links which have already altered the demand for tobacco products in the U. K. and could well carry over into continental Europe.

The projections of tobacco supplies coming from Greece

were derived from Vandendries's projections for 1975. It is assumed that the volume of tobacco exports originating in the AOM and Greece would stay relatively constant regardless of the production and consumption growth assumed in the Community with the third countries supplying the residual between E.E.C. consumption and Community, AOM and Greece suppliers. This does not seem unrealistic in the light of the Common Agricultural Policy which gives preferential treatment to these areas.

Two projections are made for the volume of United States exports of raw tobacco to the Community. The lower projection assumes that the United States only accounts for roughly 19 per cent of the E.E.C. tobacco market. This would be a reduction in the present United States share of near 1/3. This is a distinct possibility if Rhodesia continues to develop at or near the rate which she has shown in the past.

> Association for Rhodesia would mean that they could make good their statement of doubling production and exports to this market by 1970. Under such conditions, the United States would have a decreasing share of the larger E.E.C. market. Some estimates indicate the reduction would be as much as 1/3 (56, p. 18).

The higher projection assumes that the United States will maintain the same share of the E.E.C. tobacco market as she did during the 1950's, i.e., approximately 30 per cent.

The Common Market policy towards Rhodesia along with the rate of growth in production and quality in the AOM provide the key for prospective Community demand for United States

exports of raw tobacco. Western Europe will never be self-sufficient in tobacco, but will remain a large net importer. The future of United States exports of tobacco to the Six will depend upon adjustment made at home and even more on the results of United States bargaining power in reducing the preference given to other world producers through the high duties and levies of the Common Agricultural Policy. The United States must carefully evaluate the E.E.C. tobacco market and continue to use its skill and determination as a tobacco merchandiser.

5. Cotton

The future E.E.C. demand for United States cotton is not affected by domestic production within the Six. In addition, cotton exports will be admitted duty free into the Community. There will be, perhaps, increased competition from some of the AOM in Africa who will be given some sort of preferential treatment.

Cotton will be the least affected of all the agricultural commodities exported by the United States to the E.E.C. The United States share of the Community cotton market will be dependent upon the ability of the United States to remain competitive in this market both price and quality-wise, since the common external tariff rate is zero for all countries. The most significant deterrent to trade in cotton appears to be the displacement of cotton by new synthetics in final usage

which will result in reduction of import demand for raw cotton in the E.E.C. If the E.E.C. follows a pattern at all similar to the United States, a certain amount of this displacement is going to take place over the next few years. In 1939 cotton accounted for 74 per cent of the United States fiber market. By 1960 it had dropped 18 per cent to the place where it now only accounts for 56 per cent of the fiber market as it has been replaced by synthetic man-made fibers. In Europe, however, such an increase in synthetics would hardly bring the Six to the United States consumption level in 1939. The delicate balance of cotton textiles with man-made fibers is still very important in Europe. Man-made fibers are produced in significant volume in the Six and any adverse change in the competitive relationships among fibers will result in a decline in demand for raw cotton. The outlook does, however, seem favorable for market development in the cotton industry. Cotton textile markets are highly elastic and respond readily to price, quality and promotion, particularly in household and apparel goods.

The development of the textile industry in the E.E.C. is very uncertain. Considerable production capacity has been added in Asia, Africa and Latin America in the past 10 years. It remains to be seen whether the textile industry will grow and prosper or whether imports from low-cost producers such as India and Hong Kong will supply a growing share of the market. This growth of production capacity in the under-

developed countries will not only prove to be competitive in the domestic E.E.C. market, but would also reduce the demand for textile imports in the traditional European and Latin American markets.

The future for United States cotton exports in the E.E.C. seems to be dependent upon the development of several important variables, i.e., the substitution of the man-made fibers for the natural fibers, the development of low cost foreign producers and textile manufactures in the underdeveloped countries and the over-all competitiveness of United States cotton on the world market.

A projection analysis is dependent on the assumptions made concerning the aforementioned variables. The FAO suggested that import demand for raw cotton in Western Europe may not rise much during the 1960's in light of increased substitution of synthetics and of possible declines in the region's net exports of cotton goods (50, p. II, 61). On this basis the FAO predicted that Western Europe's net imports of cotton would remain relatively stable over the next 10 years. Under the FAO "low income growth" assumption, net imports of raw cotton into Western Europe would decrease by roughly 75 million metric tons while under the "high income growth" assumption they would increase by an equivalent amount. Using these projections as a basis for reference, projections were made in regard to the future demand in the E.E.C. for raw cotton. Under the FAO assumptions the E.E.C. would import

Table 61. E.E.C. imports of cotton, 1958 and projections for 1970 (1969-71)[a] (thousand metric tons)

	1957-59	1969-70 L	1969-70 H
Western Europe net imports	1423	1350	1500
E.E.C. total imports	1080	1000	1150
of which United States exports			
"low"	435	200	230
"high"		400	460

L refers to a growth of GNP of 4.2 per cent and 4.7 per cent in Western Europe and the E.E.C. respectively.

H refers to a growth of GNP of 5.2 per cent and 5.5 per cent in Western Europe and the E.E.C. respectively.

"low" assumes the U. S. share of the E.E.C. market to be 20 per cent.

"high" assumes the U. S. share of the E.E.C. market to be 40 per cent.

[a]Source: (50).

a volume of raw cotton lying in the range of from 1000 to 1150 thousand metric tons. The amount of this volume of total imports of cotton originating in the United States will depend completely on the price-quality competitiveness of the United States cotton on the world market. In recent years, most competitive cotton has been selling for 1 to 2 cents under the price of United States cotton (56, p. 26). This price differential is the result of foreign producers establishing their prices after the United States price supports and subsidy rates have been determined. This enables them to sell their surplus

cotton a year after harvest and forces the United States into the position of a residual supplier whose market share is limited to the approximate difference between foreign consumption and production.

The United States share of the future E.E.C. raw cotton market is projected in the light of the aforementioned facts. The "low" projection of the United States share in the Community assumes that the United States remains a residual supplier in the E.E.C. market with a market share limited to the difference between E.E.C. consumption and quantities made available by other foreign producers. A significant price differential between United States and other foreign produced cotton coupled with the presence of accumulated stocks in foreign countries could force the United States share of the Community cotton market to fall to slightly under 20 per cent in future years as it did in 1959. This could well happen if the United States is unable to remain in a competitive price-quality position. The "low" projection of United States exports of raw cotton to the E.E.C. in 1970 assumes the United States filling only 20 per cent of the Community import demand for raw cotton. The "high" projection assumes that the United States maintains her competitive position in the market and accounts for 40 per cent of total E.E.C. imports of raw cotton. This projection implies that cotton export subsidies, at or near their present levels, will likely have to be maintained if the United States hopes to continue as

the major supplier of cotton to the Six and maintain or increase the volume of cotton exported to the Community in recent years (56, p. 26). The over-all prospects for future United States-E.E.C. trade in raw cotton appears to depend most heavily upon the competitive strength of the United States on the world market. At best, prospective United States exports of raw cotton to the E.E.C. appear to be near the same volume they were in 1957-59.

6. Summary

The prospects for United States exports of agricultural commodities to the E.E.C. in 1970 do not appear to be at all optimistic. However, it bears repeating that these prospects would not have been significantly more favorable in the absence of economic integration and more specifically the Common Agricultural Policy. Of the six major commodities studied, only United States exports of feed grains, fats and oils, and tobacco appear likely to maintain their volume or to expand slightly this volume in the next ten years.

United States exports of wheat to the Community will, in all probability, be restricted to the high protein "hard wheats" needed for mixing and blending purposes. The Community is expected to become completely self-sufficient in soft wheat by 1967-69. The demand for feed grain in the Common Market countries will remain high as the livestock industry continues to develop. For this reason, United States exports of feed

grains are in a very favorable position with respect to the future E.E.C. market. This increased livestock production will also result in increased demand for oilseeds as the processed feed industry develops on the coat tails of an expanding livestock industry. United States exports of processed fats and oils can be expected to decline in future years as processing industries develop in the Six under the protection of the Common Agricultural Policy. However, the decline in the processed fats and oils can be expected to be more than compensated for by increases in United States exports of oilseeds to the Six.

The prospects for future trade in meat and meat products appear very dismal. The increased livestock production in the Community coupled with a highly protective trade policy is expected to reduce future United States exports of meat products to the Community.

The future prospect for United States exports of tobacco and cotton is not affected by the movement towards E.E.C. self-sufficiency since they are not produced in important quantities in the Community. Future United States exports of both of these commodities will be dependent upon the development of production in the AOM and in the preferential treatment given to these associated members. United States exports of raw tobacco could be seriously affected if Rhodesia should become an associate member.

It is difficult to determine the specific effect of the

Table 62. United States exports of selected agricultural commodities for 1957-59, 1961 and projections to 1970 (summary) (1000 metric tons)

Commodity	Year			
	1957-59	1961	1970	
			Low	High
Cereals	(4000)	(6327)	(5300-6300)	(3060-6340)
of which				
wheat and wheat flour	1100	2577	400	400
feed grains	2900	3750	4900-5900	2660-5940
Meat and meat prod.	43	97	9.1-24.3	33.6-90.0
Fats and oils	1557	1905	1184-1722	
Tobacco	50	95	42.5-67.0	42.8-67.5
Cotton	435	518	200-400	230-460

"Low" refers to an annual rate of growth of GNP similar to the trend during the 1950's (in the FAO study this rate of growth is assumed to be 4.7 per cent for the E.E.C.).

"High" refers to an annual rate of growth of GNP compatible to national policies (in the FAO study this annual rate of growth is assumed to be 5.5 per cent for the E.E.C.).

E.E.C. and the Common Agricultural Policy upon future United States agricultural exports to the Six. Many of the trends toward self-sufficiency were in evidence prior to the establishment of the E.E.C. As a result, these trends cannot be solely attributed to the formation of the Common Market and the ensuing Common Agricultural Policy. A modest attempt can be made at expressing the general direction of the impact of economic integration on the future United States-E.E.C.

trade pattern in agricultural commodities if it is assumed that this economic integration leads to a higher annual income growth than would be present in its absence. This makes it possible to use the various commodity projections discussed in this section to project the general direction of the impact of economic integration on the future United States-E.E.C. trading pattern. This impact can be thought of as being the difference between the "low" and "high" annual income growth assumptions. The "low" income growth assumption expresses a continued annual growth rate similar to the growth rate in the 1950's while the "high" projection assumes that an annual growth rate compatible with the aims of national policy will be achieved. If these two growth rates become the basis for analyzing the impact of European economic integration, a comparison of the two projections (see Table 62) will give the reader an indication of this impact on the future United States-E.E.C. trade pattern in agricultural commodities within the framework of these specific commodity projections. It must be remembered, however, that the two growth estimates assume the same price level and any increase in the price level resulting with the faster rate of growth could alter these projections.

It appears likely that the total value of United States agricultural exports to the E.E.C. will remain at roughly the present value level in 1970 (1.3 billion dollars in 1962). At the same time it seems very likely that the dynamic effects of integration within the Six will lead to an increase in the

value of United States non-agricultural exports. Therefore, it is reasonable to predict that the net effects of economic integration on United States exports will be positive (the gains in industrial exports more than compensating for the possible loss in agricultural exports) as compared to the situation which would have existed in the absence of integration.

IV. SUMMARY

Total world trade has expanded almost five times in value over the thirty-two years since 1928. World trade in manufactures and non-agricultural raw materials has increased more rapidly than trade in agricultural commodities and as a result the share of total world trade held by agricultural commodities has decreased since 1928. The relatively slower rate of growth of agricultural commodities can be attributed to the low income elasticities of demand with respect to most agricultural products and to the impact of economic development. Many of the developed countries are becoming self-sufficient in the temperate zone agricultural commodities; a few have become net exporters.

The United States has maintained her position as the major exporting nation in the world. United States exports of agricultural commodities have become more competitive in the world market over the time period from 1928-1960. Within the set of agricultural exports the increased competitiveness of the United States has more than compensated for the structural decline of certain agricultural commodity groups of the United States over the same period. As a result, the United States has acquired a relatively stronger position as a net exporter of temperate zone agricultural commodities. Part of this growth in United States exports of agricultural commodities can be attributed to the government disposal

programs such as P.L. 480 which have been of a trade-expanding nature. These programs have been concentrated in cereals, natural fibers, fats and oils, and tobacco. United States government disposal programs, while expanding United States trade in these particular commodities, have undoubtedly created a certain amount of trade diversion within the world trade pattern of agricultural commodities.

Temperate zone agricultural commodities have not fared as well as the tropical zone commodities in terms of exports earnings since 1928. All of the temperate zone commodity groups have declined in their relative structural position with the exception of forest products. Natural fibers appear to have suffered the worst decline during this period as synthetic fibers became more widely used and increases in demand were generally confined to the countries producing the bulk of their own natural fiber requirements. Cereals followed a similar pattern of structural decline as many countries became self-sufficient and some previously net exporting countries withdrew from the export market. The United States has become relatively more important in the cereals market during this period as her share of world exports of cereals, swelled by P.L. 480, accounted for 50 per cent of world exports in 1961. Exports of animal products have declined in relative importance in international trade, the major development being the emergence of poultry

as a principal meat product export. New Zealand and Western Europe have become important world suppliers of meat at the expense of the United States and other third countries. International trade in fats and oils has shown a marked change as exports of the animal originating fats and oils have declined in importance and exports of oilseeds have taken over the dominant position in international trade within this commodity group. The United States has emerged as one of the principal net exporters of fats and oils primarily as the result of its increased exports of oilseeds (soybeans). World tobacco exports have slightly more than doubled since 1928. Through 1960 the United States was the largest producing and exporting country in the world. However, a deterioration in the quality of American tobacco coupled with an increasing divergence of United States and world prices is resulting in a decline in the competitive position of the United States in the world market.

The E.E.C. has remained an important market for United States exports of agricultural commodities over the period under consideration in this study. During the 1950's and early 1960's 22.5 to 25.3 per cent of United States exports of agricultural commodities went to the Six. The commodity composition of this trade has changed considerably over the years. Today the bulk of United States agricultural exports to the E.E.C. consists of edible and inedible vegetable products. Wheat and wheat flour, feed grains, feeding stuff

and fruits and vegetables are the major edible vegetable products exported to the Community. The E.E.C. demand for United States wheat, except for the high protein varieties, has been declining over the past years as the Community is becoming self-sufficient in this area. However, the Community demand for feed grains has remained very strong and as a result, United States exports of feed grains are now more important than wheat and wheat flour. This growing Community demand for feed grains as well as for feeding stuffs is the result of increased livestock production within the Six. United States exports of feeding stuff to the E.E.C. have more than tripled during the past 34 years. The United States appears to have retained her relative competitive position in the E.E.C. with respect to fruits and vegetables. This can be attributed to the increased trade in prepared products such as fresh frozen vegetables and canned diciduous fruits.

The majority of United States exports of inedible vegetable products consist of fats and oils and raw tobacco. United States exports of oilseeds to the Community are now larger than exports of raw tobacco. This increased trade in oilseeds has come about as the processed feed industry developed in Europe following the increased livestock production of the 1950's. The value of United States exports of tobacco to the E.E.C. indicates that the United States has maintained its competitive position in this market. However, examination of volume figures show that the competitive position of the

United States has been deteriorating as other third countries are supplying an increasing volumetric share of the E.E.C. import demand for tobacco.

United States exports of livestock products, edible and inedible, have shown a decline in importance over the past 34 years as livestock production has increased in the Community. Meat and meat products have been the most important of United States exports of livestock products to the Six over the years. The commodity composition of United States meat exports to the E.E.C. has changed drastically during the 1950's as exports of speciality meats have decreased while exports of poultry have increased very rapidly to the point that they accounted for 60.4 per cent of United States exports of meat products in 1960.

United States exports of natural fibers to the E.E.C., in particular raw cotton, have decreased over the years following the pattern of structural decline of natural fibers in the world pattern of trade. Cotton was the most important United States export to the Community in 1928 accounting for 2/3 of United States agricultural exports to the member countries. In 1962 United States cotton exports to the E.E.C. accounted for only 10 per cent of total agricultural exports to the Community. This decline in the importance of cotton to the United States-E.E.C. trade pattern in agricultural commodities can be attributed to increased domestic consumption, increased competition from synthetics and increased

competition from third country suppliers of cotton and cotton manufactures.

It is fairly clear that prospects for future agricultural exports to the Six by the United States are not at all encouraging. The five commodity groups previously studied with respect to future import demand in the E.E.C. support the above statement. These five commodities have accounted for nearly 80 per cent of our agricultural exports to the Community. Only three of these groups show any hope for continuation of present volume or at most only slight expansion. These commodities are oilseeds, feed grains, and tobacco. The Community market for wheat and meat products will decline severely in the next few years if the Common Agricultural Policy, as it is now known, remains in effect. There is still a question as to the future position of cotton in the future trading pattern. The United States will quite likely remain competitive in this commodity. Cotton may, however, continue to suffer a structural decline in world trade which may lead to a decrease in volume of United States exports of cotton to the E.E.C. by 1970, even though the competitive position of the United States is maintained.

These pessimistic expectations result from the movement towards self-sufficiency for a wide range of agricultural products of a temperate nature in the E.E.C. and from the increased production and trade of the AOM. An examination of the economies of the member countries prior to the formation

of the Common Market reveals that these trends were present then and would probably have continued in the absence of a common agricultural agreement. These policies of the individual countries were aimed at improving the economic position of the agricultural sector through the use of price supports. The objective of these price supports was to maintain income parity between the agricultural sector and the other sectors of their economies. As a result, production of agricultural commodities was increasing faster than consumption and imports from third countries were beginning to decline (with the exception of West Germany whose import requirements rose during this time). This trend would probably have continued in the direction of greater self-sufficiency. As the attainment of this last goal was approached, policy changes to restrict production rather than to increase the subsidization going to the agricultural sector would likely have been made.

The establishment of the E.E.C. and a Common Agricultural Policy alters the previous discussion of probable developments in the absence of integration. The adoption of a one-price system is going to result, hopefully, in the convergence of all member country prices to a single Community price (for each commodity) by 1970. Depending on the target prices selected, this convergence could lead to a more rapid increase in price levels and as a result could stimulate a more rapid increase in domestic production than if the Common Agricultural Policy were not in existence.

Another important factor which must be considered is that the Common Agricultural Policy is established for the Community as a whole rather than for any one individual country. As a result, any individual member country does not need to worry about surplus production in a commodity as long as another member is still importing the commodity from an outside source. In fact, this production will be encouraged until the Community as a whole is self-sufficient. Such a policy could stimulate the present movement towards self-sufficiency in the Community. If self-sufficiency is approached at a faster rate, a growing divergence might occur between price levels inside and outside the Community which could lead to even more restrictive agricultural policies.

The United States is relatively fortunate in that its E.E.C. export trade is concentrated in such commodities as coarse grains, oilseeds, cotton and tobacco rather than the tropical products such as cocoa, coffee and sugar. The third country producers of these tropical products are going to face increased competition from the AOM in Africa. The AOM already are growing in importance as world suppliers of tropical agricultural commodities at the expense of producers in the Asian and Latin American countries. The preferential treatment given the AOM by the E.E.C. could result in their monopolizing the import trade of the E.E.C. in regard to the tropical agricultural commodities. The prospects for third countries whose concentration is in the latter categories may

well be even more unfavorable than for the United States.

The real hope for rational economics in future agricultural trade lies in countries recognizing the real cost, to themselves and to the world, of agricultural protectionism. The Common Agricultural Policy literally removes the E.E.C. agricultural sector from the economic resource allocating mechanism of world market forces. The E.E.C. is a net importer and all policy changes, both for the good and the bad, are immediately passed on, in part, to other countries via trade effects. The E.E.C. is trying to reconcile the conflicting interests of member countries at the expense of third country interests. The cost of a policy, such as this, which insures an absolute level of protection through use of subsidies, levies and trade restraints will be eventually shared by the member countries as well as the rest of the world.

United States trade policies should be directed towards achieving world economic development within the framework of a freer trading system. Policy is not created in a vacuum. It is the result of world economic interaction. With the "Trade Expansion Act of 1962", the United States has taken a step towards leadership in the liberal direction. The United States must take this responsibility of leadership in liberal trade, even if some domestic adjustment must take place over the short run. The world economic framework is rapidly changing and the United States must change or eventually suffer, as would the rest of the world, from extensive trade restrictions.

The likelihood that other nations will choose the route of multilateral trade rather than protectionism appears great to the extent that the United States is able to increase the opportunities for freer trade. Access to our own markets may well turn out to be the link holding the free world economy together. It is the general hope that this present tendency towards protectionism in agricultural production in the E.E.C. will be short lived and that, in any case, it will not in the future extend to industrial imports from third countries which as yet have been exempt from serious restrictive practices. If these broad conditions are met this experiment in economic integration may prove to be the intermediary step towards the more desirable ideal of free trade and true international economic integration.

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VII. APPENDIX

Table 63. Total world and United States exports including "Special Category" exports for selected years (millions of dollars)[a]

	1928	1948	1952-54	1956-57	1958	1959	1960
Total U. S. exports (excluding "Special Category" exports)	5,127	12,651	15,360	19,950	17,893	17,566	20,325
U. S. "Special Category" exports	--	1,656	5,099	4,946	2,417	2,488	
TOTAL U. S. EXPORTS	5,127	14,307	20,459	24,896	20,310	20,054	
Total world exports (excluding "Special Category" exports)	30,068	53,132	74,744	96,398	95,695	101,218	127,500
World "Special Category" exports	--	5,344	11,223	13,298	9,972	10,386	--
TOTAL WORLD EXPORTS	30,068	58,476	85,967	109,696	105,667	111,604	--

[a]Source: (41 and 54).

Table 64. Percentage of world and United States exports accounted for by exports of selected agricultural commodities 1928 to 1960[a]

Year / Commodity	Commodity group exports as a percentage of total world exports								U.S. exports as a percentage share of total world exports							
	1928	1933	1948	1952-54	1956-57	1958	1959	1960	1928	1933	1948	1952-54	1956-57	1958	1959	1960
Meat & meat prod.	1.81	2.34	1.59	1.13	1.27	1.21	1.27	1.22	13.99	12.04	8.34	6.19	7.69	6.59	7.47	8.35
Dairy prod.	2.02	2.25	2.35	1.32	1.16	1.09	1.17	1.04	3.42	1.97	20.81	8.62	11.88	16.89	10.66	9.42
Fish & fish prod.	0.90	1.00	0.59	0.59	0.61	0.67	0.64	0.59	8.60	8.17	8.94	3.32	3.36	2.71	3.62	3.42
Hides, skins, & furs	1.65	1.30	0.71	0.41	0.48	0.40	0.49	0.47	11.41	14.66	13.86	17.69	18.55	20.04	16.96	19.46
Cereals	6.89	4.08	8.03	3.40	3.16	2.74	2.73	2.64	17.16	8.54	49.60	38.87	39.65	46.24	47.17	51.81
Feeding stuff	0.27	0.23	0.28	0.25	0.32	0.24	0.31	0.26	42.98	46.67	11.96	11.57	17.38	19.43	34.66	34.42
Fruits, veg. & prep.	2.05	2.79	2.01	1.67	1.74	1.63	1.53	1.46	27.38	29.70	34.61	18.69	20.50	22.58	22.57	21.69
Coffee, tea, cocoa & spices	2.47	2.67	2.54	2.85	2.44	2.24	2.12	1.88	0.66	0.83	1.01	0.79	0.87	0.91	0.97	1.07
Sugar	2.02	1.26	1.92	0.64	0.70	0.61	0.52	0.56	3.71	4.38	3.43	6.61	5.40	5.39	6.15	5.36
Beverages	0.95	0.90	0.59	0.60	0.61	0.63	0.59	0.58	0.86	0.86	10.59	2.39	1.25	1.19	0.93	0.83
Fats & oils	1.77	1.69	2.18	0.96	1.18	1.03	1.12	1.01	26.63	27.49	19.87	33.17	42.53	42.82	46.90	50.26
Other food prod.	2.23	2.02	0.91	0.50	0.70	0.56	0.53	0.50	1.72	1.64	26.74	25.06	38.78	29.06	17.67	16.13
Other agricultural prod.	0.77	0.75	0.21	0.66	0.75	0.61	0.60	0.58	11.46	14.54	48.86	11.55	11.27	10.26	13.23	11.95
Tobacco (raw)	1.18	1.21	1.08	0.66	0.71	0.69	0.63	0.60	56.51	82.13	61.66	54.34	45.57	48.11	47.77	49.55
Natural fibers	10.63	10.36	6.73	3.81	3.51	2.73	2.22	2.47	32.32	42.18	17.69	24.22	24.98	23.98	19.61	32.83
Forest prod.	2.21	2.08	2.48	2.73	2.63	2.18	2.11	2.21	2.98	3.94	8.77	5.67	7.33	7.61	8.76	10.67
Total Agricultural Exports	39.81	36.93	34.18	22.18	21.98	19.26	18.58	18.05	18.37	21.71	24.82	17.93	19.70	19.94	20.15	22.91
Total Non-Agricultural Exports	60.19	63.07	65.82	77.82	78.02	80.74	81.42	81.95	19.66	16.65	31.30	18.62	18.16	15.71	14.02	14.41
TOTAL EXPORTS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	19.14	18.52	29.08	18.47	18.50	16.53	15.16	15.94

[a]Source: (3, 51, 52, 64 and 65).

Table 64 (Continued)

Year / Commodity	Commodity group exports as a percentage of total world exports								U.S. exports as a percentage share of total world exports							
	1928	1933	1948	1952-54	1956-57	1958	1959	1960	1928	1933	1948	1952-54	1956-57	1958	1959	1960
Meat & meat prod.	1.32	1.34	0.45	0.38	0.53	0.48	0.63	0.64	3.46	3.52	1.56	1.75	2.25	2.08	2.53	2.46
Dairy prod.	0.36	0.24	1.68	0.62	0.75	1.12	0.83	0.61	0.94	0.55	5.76	2.86	3.19	4.82	3.34	2.36
Fish & fish prod.	0.41	0.44	0.18	0.11	0.11	0.11	0.15	0.13	1.06	1.02	0.63	0.50	0.47	0.47	0.62	0.49
Hides, skins, & furs	1.00	1.03	0.34	0.39	0.48	0.49	0.55	0.57	2.58	2.39	1.16	1.82	2.06	2.11	2.22	2.19
Cereals	6.15	1.88	13.65	7.16	6.77	7.65	8.49	8.57	16.12	4.34	46.79	33.27	28.90	32.94	34.39	33.04
Feeding stuff	0.60	0.59	0.12	0.15	0.30	0.28	0.70	0.56	1.58	1.35	0.40	0.71	1.29	1.19	2.86	2.15
Fruits, veg. & prep.	2.93	4.48	2.39	1.69	1.93	2.23	2.28	1.99	7.67	10.34	8.21	7.87	8.25	9.59	9.22	7.66
Coffee, tea, cocoa & spices	5.09	0.12	0.09	0.12	0.11	0.12	0.14	0.13	0.22	0.28	0.30	0.56	0.49	0.53	0.55	0.49
Sugar	0.29	0.30	0.23	0.23	0.20	0.20	0.21	0.19	1.03	0.69	0.77	1.06	0.88	0.85	0.85	0.73
Beverages	0.04	0.04	0.21	0.08	0.04	0.05	0.04	0.03	0.11	0.10	0.73	0.36	0.18	0.20	0.15	0.12
Fats & oils	2.46	2.51	1.49	1.73	2.72	2.66	3.47	3.18	6.45	5.79	5.12	8.02	11.62	11.43	14.05	12.24
Other food prod.	0.20	0.18	0.84	0.68	1.47	0.50	0.61	0.50	0.53	0.41	2.87	3.18	6.26	2.16	2.48	1.93
Other agricultural prod.	0.46	0.59	0.36	0.41	0.46	0.38	0.53	0.43	1.22	1.36	1.24	1.91	1.96	1.63	2.13	1.67
Tobacco (raw)	3.49	5.35	2.29	1.94	1.75	2.00	1.98	1.86	9.15	12.35	7.86	9.02	7.49	8.60	8.04	7.17
Natural fibers	17.95	23.59	4.09	5.00	4.74	3.97	2.87	5.09	46.99	54.49	14.04	23.22	20.26	17.07	11.63	19.60
Forest prod.	0.34	0.44	0.75	0.84	1.04	1.00	1.22	1.48	0.90	1.02	2.57	3.89	4.45	4.32	4.95	5.70
Total Agricultural Exports	38.20	43.30	29.16	21.54	23.41	23.23	24.69	25.95	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total Non-Agricultural Exports	61.80	56.70	70.84	78.46	76.59	76.77	75.31	74.05								
TOTAL EXPORTS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00								

Table 65. Value of world and United States exports of selected agricultural commodities[a] (U.S. government disposal programs removed)

Year	1956-57		1958		1959		1960	
Commodity	U.S.	World	U.S.	World	U.S.	World	U.S.	World
Meat & meat prod.	85.8	1,335.1	82.3	1,298.7	107.7	1,460.3	129.3	1,553.2
Dairy prod.	----	1,097.3	72.0	1,048.3	71.3	1,277.8	67.4	1,266.6
Fish & fish prod.	21.8	649.2	19.4	715.5	26.7	736.6	25.6	749.3
Hides, skins & furs	92.5	512.2	83.2	429.6	92.6	561.8	113.3	591.6
Cereals	489.3	2,529.5	679.5	2,257.5	679.7	2,338.8	759.2	2,379.7
Feeding stuff	59.9	344.7	49.[illegible]	252.7	123.0	354.9	113.2	328.9
Fruits, veg. & prep.	358.9	1,842.8	386.6	1,741.0	393.8	1,756.9	402.2	1,861.1
Coffee, tea, cocoa & spices	22.6	2,608.5	21.9	2,398.6	23.7	2,441.8	25.6	2,398.0
Sugar	40.6	751.5	35.2	652.7	36.5	593.7	38.4	716.2
Beverages	8.2	656.0	8.1	679.2	6.3	678.0	6.2	745.5
Fats & oils	387.1	1,115.1	344.6	973.8	470.1	1,155.3	530.2	1,169.3

[a]Source: (51, 52 and 61).

Table 65 (Continued)

Year	1956-57		1958		1959		1960	
Commodity	U.S.	World	U.S.	World	U.S.	World	U.S.	World
Other food prod.	289.6	748.1	88.7	604.5	106.4	603.4	101.4	631.2
Other agricultural prod.	81.0	798.3	64.1	652.6	82.2	683.8	77.3	725.7
Tobacco	308.6	723.5	324.4	706.5	294.6	673.1	307.4	692.6
Natural fibers	585.4	3,407.9	425.5	2,654.7	293.0	2,346.6	842.0	2,957.5
Forest prod.	206.5	2,817.3	178.0	2,338.1	213.1	2,432.7	300.7	2,817.0
Total Agricultural Exports	3,037.8	21,972.0	2,862.6	19,404.0	3,020.7	20,096.1	3,839.4	21,583.4
Total Non-Agricultural Exports	15,122.8	83,494.6	13,612.3	86,638.9	13,140.0	93,716.6	15,051.1	104,482.1
TOTAL EXPORTS	18,180.6	105,466.6	16,474.9	106,042.9	16,160.7	113,812.7	18,890.5	126,065.5

Table 66. Percentage of world and United States exports accounted for by exports of selected agricultural commodities 1956-57 to 1960[a] (U.S. government disposal programs removed)

Year / Commodity	Commodity group exports as a percentage of total world exports				U.S. exports as a share of total world exports				Commodity group exports as a percentage of total U.S. exports				U.S. exports to the E.E.C. as a percentage share of total U.S. exports per commodity group			
	1956-57	1958	1959	1960	1956-57	1958	1959	1960	1956-57	1958	1959	1960	1956-57	1958	1959	1960
Meat & meat prod.	1.27	1.22	1.28	1.23	6.43	6.34	7.38	8.32	0.47	0.50	0.67	0.68	2.82	2.88	3.57	3.37
Dairy prod.	1.04	0.99	1.12	1.00	----	6.87	5.58	5.32	----	0.44	0.44	0.36	----	2.52	2.36	1.76
Fish & fish prod.	0.62	0.67	0.65	0.59	3.36	2.71	3.62	3.42	0.12	0.12	0.17	0.14	0.72	0.68	0.88	0.67
Hides, skins & furs	0.49	0.41	0.49	0.47	18.06	19.37	16.48	19.15	0.51	0.51	0.57	0.60	3.04	2.91	3.07	2.95
Cereals	2.40	2.13	2.05	1.89	19.34	30.10	29.06	31.90	2.69	4.12	4.21	4.02	16.11	23.74	22.50	19.77
Feeding stuff	0.33	0.24	0.31	0.26	17.38	19.43	34.68	34.41	0.33	0.30	0.76	0.60	1.97	1.72	4.07	2.95
Fruits, veg. & prep.	1.75	1.64	1.54	1.48	19.48	22.21	22.41	21.61	1.97	2.35	2.44	2.13	11.81	13.51	13.04	10.48
Coffee, tea, cocoa & spices	2.47	2.26	2.15	1.90	0.87	0.91	0.97	1.07	0.12	0.13	0.15	0.14	0.74	0.77	0.78	0.67
Sugar	0.71	0.62	0.52	0.57	5.40	5.39	6.15	5.36	0.22	0.21	0.23	0.20	1.34	1.23	1.21	1.00
Beverages	0.62	0.64	0.60	0.59	1.25	1.19	0.93	0.83	0.05	0.05	0.04	0.03	0.27	0.28	0.21	0.16
Fats & oils	1.08	0.92	1.02	0.93	34.71	35.39	40.69	45.34	2.13	2.09	2.91	2.81	12.74	12.04	15.56	13.81
Other food prod.	0.71	0.57	0.53	0.50	38.71	14.67	17.62	16.06	1.59	0.54	0.66	0.54	9.53	3.10	3.52	2.64
Other agricultural prod.	0.76	0.62	0.60	0.58	10.15	9.82	12.02	10.65	0.45	0.39	0.51	0.41	2.67	2.23	2.72	2.01
Tobacco (raw)	0.69	0.67	0.59	0.55	42.65	45.92	43.77	44.38	1.70	1.97	1.82	1.63	10.16	11.33	9.75	8.01
Natural fibers	3.23	2.50	2.06	2.35	17.18	16.03	12.49	28.47	3.22	2.58	1.81	4.46	19.27	14.86	9.70	21.93
Forest prod.	2.67	2.20	2.14	2.23	7.33	7.61	8.76	10.67	1.14	1.08	1.32	1.59	6.80	6.22	7.05	7.83
Total Agricultural Exports	20.83	18.30	17.66	17.12	13.83	14.75	15.03	17.79	16.71	17.38	18.69	20.32	100.00	100.00	100.00	100.00
Total Non-Agricultural Exports	79.17	81.70	82.34	82.88	18.11	15.71	14.02	14.41	83.29	82.62	81.31	79.68				
TOTAL EXPORTS	100.00	100.00	100.00	100.00	17.24	15.54	14.20	14.98	100.00	100.00	100.00	100.00				

[a]Source: (51, 52 and 61).

Table 67. Indices of projected per caput demand by major food groups in the E.E.C.[a]

Commodity	cereals		starchy roots		sugar		fruits, veg.		fats & oils[b]		milk & milk prod.		meat	
	low	high	low	high	low	high	low	high	low	high	low	high	low	high
Income effect only index 1970 (1958=100)	90	89	89	87	119	123	125	132	106	107	112	115	130	139
Income and population effect index 1970 (1958=100)	98	97	97	94	130	134	136	143	115	117	122	125	141	148
Coefficients of income elasticity of demand in terms of quantity	-0.3		-0.3		0.5		0.6		0.16[c]		0.3		0.7	

	eggs		calories		animal protein		farm value		coffee		tea		cocoa	
	low	high	low	high	low	high	low	high	low	high	low	high	low	high
Income effect only index 1970 (1958=100)	132	140	104	104	123	128	118	122	127	132	102	118	132	134
Income and population effect index 1970 (1958=100)	144	152	113	113	134	139	128	133	138	143	111	128	143	146
Coefficients of income elasticity of demand in terms of quantity	0.8		0.10		0.57		0.47		0.6		—		0.3	

"low" assumes an annual growth in GNP of 4.7 per cent.
"high" assumes an annual growth in GNP of 5.5 per cent.

[a]Source: (50).

[b]Including butter.

[c]Excluding butter.